NEW EQUIPMENT DIGEST

A Penton Publication

September, 1959

Volume 24—Number 9

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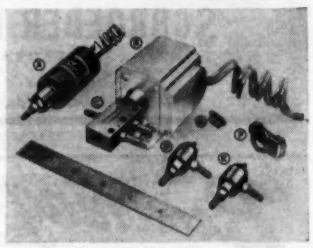
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

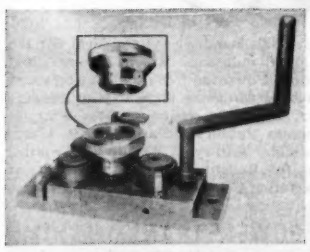
MINIATURE VALVE SOLENOIDS
direct and alternating current types



Direct-current, miniature solenoid designated A in photo is designed for operation of MAV-2 miniature two-way air valves D and three-way valves E. Recommended operating pressure is up to 150 psi. Units are rated 12 v at 0.64 amp and 24 v at 0.32 amp. Letter B in photo designates the 110-125 v ac solenoid for operation at 0.81 amp. It is shown fitted with a Minimatic 4-way valve, but will operate two and three-way valves as well. This unit is housed in cast aluminum case measuring 2 x 2 1/16 x 3 3/16 in. overall. Direct-current units measure only 1⅜ in. in diameter by 2 5/16 in. long. Manual pushbutton G and cam follower head F are also shown. Coils for both types are easily replaced. Made by **Clippard Instrument Laboratory, Inc.**, 7390 Colerain Rd., Cincinnati 39, Ohio.

▲ For more details circle **NED-1 J9** on enclosed inquiry slip ▲

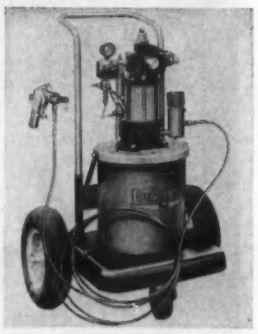
CIRCUMFERENTIAL MARKER
stamps figures around metal parts



Equally spaced numbers or letters are stamped around the circumference of metal parts by the Model GRD-950-1A marking fixtures. It can be adapted for graduation marking where extremely close tolerance is not required. Fixture is composed of geared-together circular marking die, mandrel for holding the part, and an operator's handle. Depth of impression is adjustable for marking the circumference of any circular part. Photo shows dial handle for a flow control valve being marked. Made by **M. E. Cunningham Co.**, 1025 Chateau St., Pittsburgh 33, Pa.

▲ For more details circle **NED-2 J9** on enclosed inquiry slip ▲

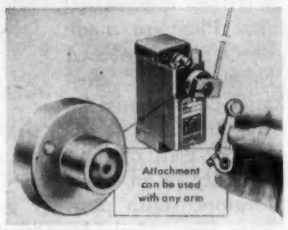
AIRLESS PAINT SPRAYER
overspray practically nonexistant



Minimum of overspray and vapors, elimination of need for shielding or masking, and even coats of light or heavy body materials with sharp, clean edges are advantages reported for line of airless spray painting equipment. Illustrated portable unit consists of pump, cart, tank, lid, air motor driven agitator, elevator to facilitate changing material containers, wire braid reinforced Teflon-lined hose, and airless spray gun with a tungsten carbide spray cap. Material is forced through a tiny orifice at pressures of 1800 to 2400 psi. When released from this high pressure, material expands and breaks into small particles. These atomized particles have sufficient velocity to carry to surface, but not enough force to bounce. Flow-out is excellent, and fast thinners speed drying. Made by **DeVilbiss Co.**, 300 Phillips Ave., Toledo 1, Ohio.

▲ For more details circle **NED-3 J9** on enclosed inquiry slip ▲

LIMIT SWITCH DAMPER
prevents arm snapback damage



Usable with any arm on Square D Type A oil-tight limit switches, this damping attachment eliminates contact transfer or "telegraphing" which might result from switch arm snapback. It also increases total arm travel from 30 to 120 degrees. Made by **Square D Co.**, 4041 N. Richards St., Milwaukee 12, Wis.

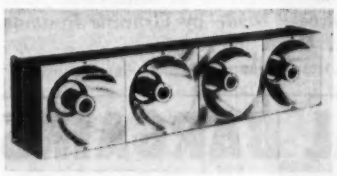
▲ For more details circle **NED-4 J9** on enclosed inquiry slip ▲

WARNING FLASHER
has two-way or circle visibility

Neon coil with a continuous operating life exceeding two years is built into the NRB Series Flashmaster, a warning light for heavy duty use. It is offered with two-way 4-in. lenses or a 360-degree fresnel dome. Operation is on a standard 6-v lantern battery, life of which is 8 weeks in 24-hr service. Mechanism and lamp are resiliently mounted on 18-gage steel case. Made by **Carpenter Mfg. Co.**, Bradley Street, Somerville 45, Mass.

▲ For more details circle **NED-5 J9** on enclosed inquiry slip ▲

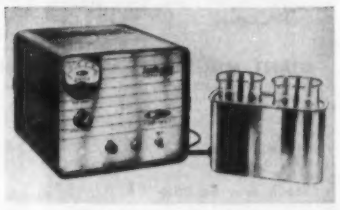
INFRARED GENERATOR
1000-w units operate up to 900° F



Introduction of this 1000-w lava coated ceramic type driQuik electric infrared generator permits making drying and baking ovens which operate at temperatures to 900° F. Higher output also allows use of smaller ovens for many heating applications. Temperature of this long-life unit can be regulated with cyclical controllers to match output with needs of process. Each zone can be operated at 0 to 100 per cent of rating. Vibration, shock, vapor, and moistureproof, generators are made by **Dry Clime Lamp Corp.**, driQuik Div., Greensburg, Ind.

▲ For more details circle **NED-6 J9** on enclosed inquiry slip ▲

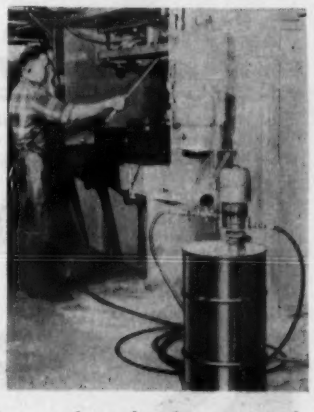
ULTRASONIC CLEANER
handles two jobs at one time



Two different small parts cleaning jobs can be handled at the same time by this low-cost Son-Blaster ultrasonic cleaning unit. The Series 400 unit ultrasonically agitates contents of two 400-ml Pyrex beakers, making possible simultaneous washing and rinsing operations. Items can be placed in the separate beakers or directly in the stainless steel tank. Cleaner operates on 115-v 50/60-cycle ac and consumes no more power than an electric light bulb. Made by **Narda Ultrasonics Corp.**, 625 Main St., Westbury, L. I., N. Y.

▲ For more details circle **NED-7 J9** on enclosed inquiry slip ▲

INDUSTRIAL SPRAY CLEANER
combines pressure and detergent



Fast, economical industrial cleaning is performed with this Hydra-Clean air-powered hydraulic-pressure spray washer. Pressure spray and special detergent quickly flush away dirt, grit, grease, grime, or scale from equipment, tools, machinery, vehicles, windows, walls, and floors. The corrosionproof pump unit mounts on any 15 to 55-gallon open drum. The 40-ft hose and insulated spray nozzle afford flexibility of use in plant or out, wherever there is a source of compressed air. Made by **Gray Co.**, 1036 Sibley St. N. E., Minneapolis 13, Minn.

▲ For more details circle **NED-8 J9** on enclosed inquiry slip ▲

STATIC CONTACTOR
is maintenance-free control

Constructed entirely of semiconductors and related solid state components, this static contactor has no moving parts. It provides high speed operation, long maintenance-free life, and reliability under adverse environment, including explosive atmosphere, shock, and vibration. Required actuation power is a 10-v step input at 10 ma, and actuation and deactuation times are typically ½ cycle of the line frequency. Maximum load is 20 amp at 25° C on line voltage of 115 v 400 cycles. Device can be modified to simulate circuit breaker operation, and the input circuit can be changed to accept a proportional input actuating signal. Made by **Walter Kidde & Co.**, Engineering & Research Div., Electronics Dept., 9 Brighton Rd., Clifton, N. J.

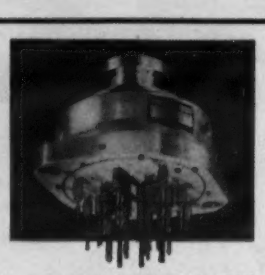
▲ For more details circle **NED-9 J9** on enclosed inquiry slip ▲

MIST COOLANT SYSTEM
in single-nozzle air-operated unit

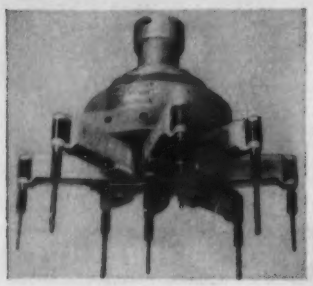
Integral fluid metering and air needle valves in this single-nozzle mist coolant unit permit regulation of richness and flow of coolant to the needs of the job. Usable on drilling, tapping, milling, sawing, grinding, and some cutoff operations, system will also apply light viscosity oils to punch press dies and for other lubricating applications. Central system installation can be made with slight modification. Features include corrosion-proof construction, replaceable nozzle tips, translucent reservoir for check of liquid level, and conical concentrated coolant mist pattern. Made by **Graymills Corp.**, 3705 N. Lincoln Ave., Chicago 13, Ill.

▲ For more details circle **NED-10 J9** on enclosed inquiry slip ▲

MEET COMPETITION HEAD ON with Zagar Drilling, Tapping and Reaming Equipment



With Zagar FIXED CENTER Drill Heads you can drill up to 1500 holes per pass. Also, they can be designed so as to give flexibility and changeability. *Engineering Sheets 66 to 68-A.*



Zagar ADJUSTABLE SPINDLE HEAD eliminates gear clusters, universal joints and flexible shafts. Unlimited inner hole patterns with bolt circles up to 23" diameter. Adaptable to any standard drill press; reworkable. *Bulletin 458.*

Just pennies per part

23880 LAKELAND BLVD.
CLEVELAND 22, OHIO

Zagar INCORPORATED
TOOLS FOR INDUSTRY and SPECIAL MACHINERY

▲ For more details circle NED-11 J9 on enclosed inquiry slip ▲

4 do the work of 6

DICKROPE "Q D" V-BELT DRIVES deliver 40% more H.P. per belt!

MANY SAVINGS . . . Sheaves can be smaller, lighter, the drive more compact, and belting costs sharply reduced by the use of today's Dickrope "QD" V-Belt Drives. Reduced initial costs . . . increased belt life . . . savings on maintenance and space.

"TEMPERED" CONSTRUCTION . . . a pacesetting advance that increases belt h.p. rating 40%, minimizes stretch, increases resistance to abrasion and shock, adds flexibility. Smooth vibration-free operation is assured by freedom from surface irregularities and by the Dick "QD" sheave . . . precision made, tight fitting, easily installed and removed.

Prompt, off-the-shelf delivery of belting and sheaves to meet practically every drive requirement.

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Dept. 11-I
Totowa, New Jersey

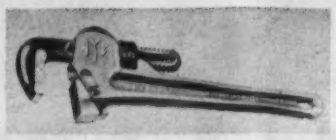
Without charge or obligation to me, please send a copy of your new "Engineering Manual — Dickrope 'QD' V-Belt Drives."

Name .....

Position .....

▲ For more details circle NED-12 J9 on enclosed inquiry slip ▲

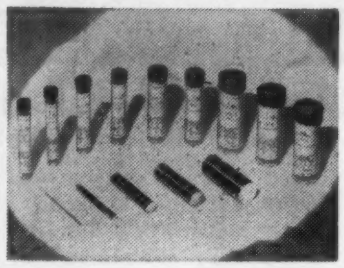
PIPE WRENCH
has floating lower jaw



Hand adjustment is minimized in this pipe "rench" which features a "floating" lower jaw that takes hold under handle pressure. Jaw is installed in a smoothly machined channel and is free to "float" in and out. Upper jaw remains stationary. Lower jaw lets go instantly upon release of handle pressure. Tool has forged steel jaws and malleable iron handle. Made by **Nye Tool Co.**, 4126 W. Fullerton Ave., Chicago 39, Ill.

▲ For more details circle NED-13 J9 on enclosed inquiry slip ▲

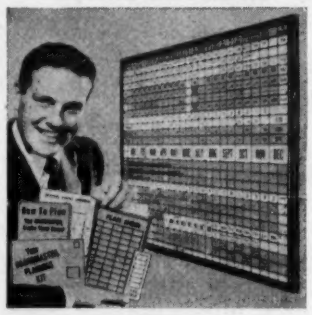
PRECISION PINS
ground to 0.000050-in. tolerance



Low cost precision 2-in. pins are available in sizes from 0.030 to 0.750 in. in increments of 0.001 in. Tolerance is within ±0.000050 in. Pins are made of oil-hardened Swedish tool steel and heat treated to RC-63-65. The 721 sizes comprising the line serve 90 per cent of pin needs and can be purchased individually or in sets. They are used as core pins, perforators, setup pins, or gages, and are reversible for long life. Made by **Dundick Tool Works, Inc.**, 3410 W. 31st St., Chicago 23, Ill.

▲ For more details circle NED-14 J9 on enclosed inquiry slip ▲

VISUAL CONTROL BOARD KIT
aids in planning, selecting system

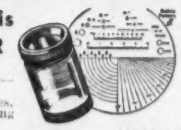


Kit containing material for planning a Boardmaster graphic visual control system offers suggestions for picturing facts graphically for production, scheduling, inventory, maintenance, sales, and other applications. A collection of 25 ideas for tailoring a system to individual requirements is presented in a brochure, "How To Plan." A 24-page booklet, "Graphic Visual Control," serves as a manual and catalog. A 17 x 22-in. plan sheet is a reduced diagram with column alignment of a standard Boardmaster panel. Control board itself is 24 x 38½ in. and can be used singly or in multiples. Custom sizes can be ordered. Made by **Graphic Systems**, 55 W. 42nd St., New York 36, N. Y.

▲ For more details circle NED-15 J9 on enclosed inquiry slip ▲

UNUSUAL BARGAINS

Check, Measure, Inspect with this 6 POWER POCKET COMPARATOR



(Complete with Leather Case)
MEASURES • Angles • Radii • Circles • Linear—in both decimal inches and millimeters.
Used to check layouts, machining on tools, dies, gauges; to check threads, chamfers, wear on cutting tools, etc.

Stock No. 30,061-AE . . . New Low Price . . . $19.50 Pstpd.
Send Check or M.O.—or order on open account.

HANDY! FAST! ACCURATE!

STEREO-MICROSCOPE Terrific Buy! American Made!

Other American made Stereos cost $250.00 to $600.00 and more! Now—save well over 50%! **Up to 3" Working Distance—Wide 3 Dimensional Field**—Used in production, in research, or at home; for inspections, examinations, counting, checking, assembling. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 23 power and 40 power clear, sharp, erect image. Helical rack and pinion focusing. Interpupillary distance adjustable. SO GOOD, WE'LL SHIP ON 10-DAY FREE TRIAL. **Stock No. 85,056-AE—full price, $89.50 f.o.b. Barrington, N. J. Low Power Supplementary Lens Attachment for above Stereo—provides 15X down to 6X with clear, extra large 1½" field at 6X. Stock #30,276-AE** $7.50
Order by Stock No. Send Check or M.O.—or order on open account.

GIANT MAGNETS! TERRIFIC BARGAINS!

War surplus—Alnico V-type! Horseshoe shape. Tremendous lifting power. 5 lb. size. Dimensions: A—3¼"; B—2¾"; C—4-3/16"; D—1¼"; E—1¼"; F—2⅝". Strength is about 2,000 Gauss. Will lift over 125 lbs.

Stock No. 70,183-AE ..... **$8.50 ppd.**
15¾ lb size magnet. Approximately 5,000-6,000 Gauss rating. Will lift over 250 lbs.

Stock No. 85,088-AE ..... **$22.50 F.O.B.** Barrington, N. J.
Shipping weight 22 lbs.

Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

FREE! Giant CATALOG of OPTICAL BUYS!

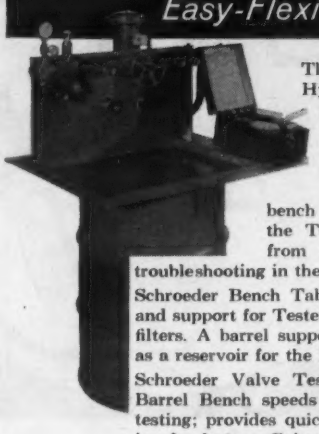
OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 100 pages—hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research lab, experimenters, hobbyists, math learning aids. No obligation. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., Barrington, N. J.

▲ For more details circle NED-16 J9 on enclosed inquiry slip ▲

BUILD YOUR OWN SCHROEDER HYDRAULIC BARREL TEST BENCH

Easy-Flexible-Low Cost



The Schroeder Portable Hydraulic Circuit Tester now teams up with the newly-designed Schroeder Bench Table to provide fast, accurate, and complete test bench instrumentation. Yet, the Tester may be removed from the Bench quickly for troubleshooting in the field or in the shop.

Schroeder Bench Table serves as work area and support for Tester, valve test bracket and filters. A barrel supports the Table and acts as a reservoir for the Bench.

Schroeder Valve Testing Header added to Barrel Bench speeds up valve and cylinder testing; provides quick disconnects and valving for faster, efficient operation.

We will gladly assist you in determining your Bench requirements—write today for the Schroeder "Test Bench Questionnaire."

SCHROEDER BROTHERS CORPORATION
Nichol Ave. • Box 72
McKees Rocks (Pittsburgh District), Pa.

▲ For more details circle NED-17 J9 on enclosed inquiry slip ▲

Browning STAINLESS STEEL FLAT-VEYOR

Moves Smoother and Quieter, Lasts Longer

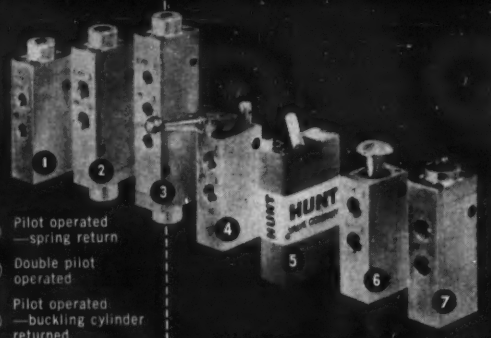
Browning FLAT-VEYOR is a materials handling system ideal for the bottling, canning, food and other industries which require rapid conveying with minimum vibration. Corrosion-free stainless steel chain coordinates perfectly with matching sprockets to *float* your product along without drag or chatter. One-piece design reduces wear; is stronger, easier to clean; eliminates troublesome attachments. Chain of case hardened steel also available, both types 3¼" to 7½" widths. Ask your Browning distributor for Bulletin CD103, which contains specifications. **Browning Manufacturing Company, Maysville, Kentucky.**

Browning POWER TRANSMISSION EQUIPMENT

▲ For more details circle NED-18 J9 on enclosed inquiry slip ▲

another new valve by HUNT

the TRIM LINE



1. Pilot operated —spring return
2. Double pilot operated
3. Pilot operated —buckling cylinder returned
4. Lever operated
5. Reserved for valve actions to come
6. Palm-button operated
7. Ball actuated

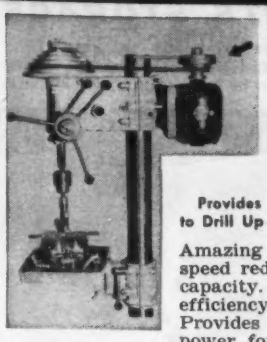
A sub-miniature valve for 0-125 p.s.i. air, oil, water or vacuum service. Available in 3-way and 4-way actions. Tapped for either ⅛" or ¼" pipe connections.

For details, write to . . .
HUNT VALVE COMPANY, SALEM, OHIO, U.S.A.

HUNT Quick-As-Wink AIR & HYDRAULIC CONTROL VALVES

▲ For more details circle NED-19 J9 on enclosed inquiry slip ▲

New "PULL-GEAR" SPEED-REDUCING PULLEY
Increases Drill Press Capacity



Provides Correct Speed and Power to Drill Up to 1 3/8" with 1/2 H.P. Motor

Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity. Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approx. 45 to 3000 RPM. Made in 3 motor shaft sizes: 1/2"-5/8"-3/4". Write for literature.

THE PULL-GEAR CO.
WRITE FOR LITERATURE
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DEALERS: Chicago, Ill.—Chicago Supply & Tool Co.
Cleveland, Ohio—Reynolds Machinery Co.
Los Angeles, Calif.—Almquist Brothers
New York City—Rudolph Bass

▲ For more details circle NED-20 J9 on enclosed inquiry slip ▲

GUARANTEED
TO SAVE FASTENING TIME & COSTS

COMPLETELY PORTABLE SPOT WELDER

220-240 V. 60 C. A. C. Single Phase

Completely portable. Welds combined thickness to 1/8". Features electronic timing control with solenoid contactor. Pre-timing assures uniform welds. Wgt. 26 lbs. Air operation optional. Stand or Roto-Balance suspension holder available.

For further information see your local distributor or write

AMPOWER PRODUCTS CO.
MANUFACTURERS OF THE ORIGINAL AND ONLY AMPOWER WELDERS
P. O. Box 464 Oak Lawn, Ill.

▲ For more details circle NED-21 J9 on enclosed inquiry slip ▲

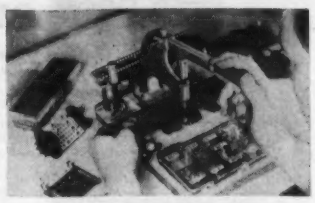
NEW Infra - Red Unit Heats People

The Overhead gas-fired PANELBLOC heats people and objects —not the surrounding air. Sun-like warmth available at the flick of a switch. No fans, no motors, no electrical connections needed. No moving parts mean maintenance free long life. Low in first cost, a miser on fuel, PANELBLOC furnishes the complete answer to Commercial and Industrial Heating Problems. *For literature and information — clip this ad to your letterhead and mail today.*

PANELBLOC DIVISION
The Bettcher Mfg. Corp.
3106 West 61 St., Cleveland, Ohio

▲ For more details circle NED-22 J9 on enclosed inquiry slip ▲

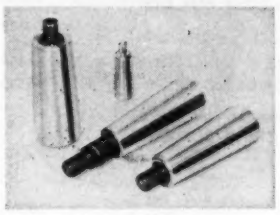
TERMINAL MOUNTING TOOL makes resistor boards, circuits



Terminal holes are punched, terminals swaged, eyelets socketed, and brackets riveted by the universal tool included in the No. 42 terminal card mounting kit. It provides an easy method of mounting standard components and building resistor boards, turrets, vertical plane circuits, and plug-in units. Tool performs the above operations by changing punch and anvil. Included ratchet terminals facilitate mounting of components, dissipate heat quickly, and permit use of short leads. Card mounting sockets mount directly to terminal cards, providing a compact, single-plane of circuitry that snaps in or mounts by brackets. Kit includes all required components and sells for $49.95 plus shipping. Made by **Alden Products Co.**, 78 N. Main St., Brockton 64, Mass.

▲ For more details circle NED-23 J9 on enclosed inquiry slip ▲

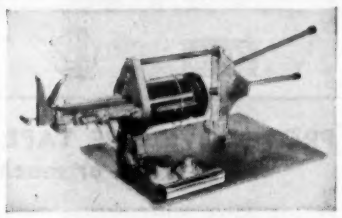
REVOLVING HANDLES facilitate hand-wheel turning



An extra long bearing surface minimizes turning friction in these aluminum revolving handles for attaching to hand wheels. Handle grip spins on a steel stud. Handle is attached by inserting stud at convenient location on wheel and slipping handle grip over the stud. Locking ring assures a good fit. Handles are made in 1 9/16, 2, 2 1/2, 2 7/8, and 3 1/4-in. lengths by **Jergens Tool Specialty Co.**, 712 E. 163rd St., Cleveland 10, Ohio.

▲ For more details circle NED-24 J9 on enclosed inquiry slip ▲

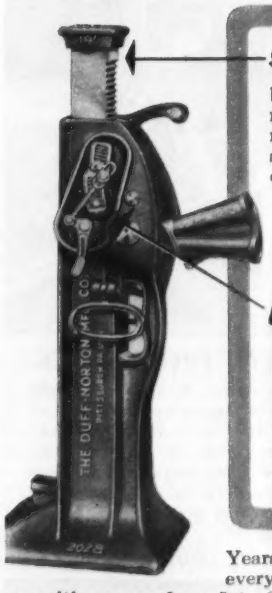
CAULKING GUN LOADER handles 1-gal can of material



Standard caulking guns can be loaded with caulking and glazing compounds, roofing cement, mastics, sealants, and putties in less than a minute with this Force-Flo Midget loader. It will also handle two-part activated Thiokol materials in 1-gal cans. A piston actuated by a pump lever exerts pressure on materials contained in the can which is attached to the loader's base. Material is forced into gun or cartridge placed in loading cradle. Loader is equipped with a mixing mount to facilitate mixing and handling of two-part activated materials. It weighs only 40 lb. Made by **Force-Flo, Inc.**, Box 2442, East Cleveland 12, Ohio.

▲ For more details circle NED-25 J9 on enclosed inquiry slip ▲

Duff-Norton Ratchet Jacks are safer...last longer



safer...
because the forged steel rack bar on Duff-Norton ratchet jacks is larger and stronger than the rack bar on any other make. Also, these jacks can not trip under load which guards men and equipment.

last longer...
because the exclusive spring mechanism makes maintenance easy. It can be adjusted, repaired or replaced without taking the jack apart. Tension can be tightened by the turn of a screw.

Years of hard use are built into every one of the nine models—capacities range from 5 to 20 tons. For rugged, dependable, fast lifting power at minimum cost ask your distributor for Duff-Norton Ratchet Jacks. **Duff-Norton Company, P.O. Box 1889, Pittsburgh 30, Pa.**

▲ For more details circle NED-26 J9 on enclosed inquiry slip ▲

SPEED MATERIAL FLOW with . . .

CANNON Pneumatic VIBRATORS
SINCE 1904

Process materials flow freely when you use Cannon pneumatic vibrators. They keep stubborn, sticky materials on the move, eliminating arching and plugging.

The rugged construction of Cannon vibrators results in a new high in efficiency and economy. Available in a wide range of styles and sizes.

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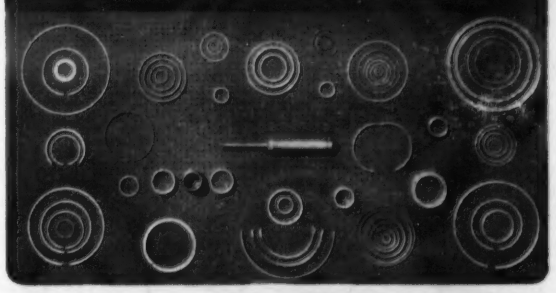
AUTO-DIESEL



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COMPRESSORS
STEAM ENGINES
DIESEL ENGINES
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SHAFT SEALS
AIRCRAFT—AN SCRAPERS
AND MANY OTHERS

Auto-Diesel has specialized in piston rings since 1921. We have but one thing to offer you—Quality Piston Rings—to your specifications—delivered on time—at attractive prices.

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Please send catalog data and price information on IDEAL Etchers.
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COMPANY
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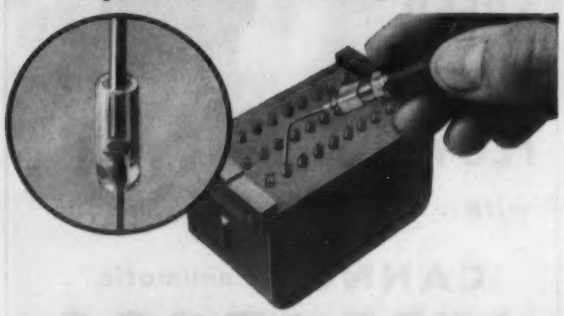
NOW—Handle tiny parts the easy, fast, accurate way, with . . .



the CARMAN VACUUM PENCIL SYSTEM

Ideal for delicate operations easily damaged by tweezers or other handling devices. A foot operated switch allows the operator to release the suction when the part is correctly positioned. Included are interchangeable tips and all necessary tubing, connectors and parts. Needs only a vacuum source (supplied as an accessory) and 115-V, 60 Cycle power.

Single station units $89.50 (Approx.)

Carman Labs manufacture special purpose production equipment for the semiconductor industry. Please write for additional literature and information.

CARMAN LABORATORIES, INC.
1012 CARMAN RD. • BEDFORD, MASS.

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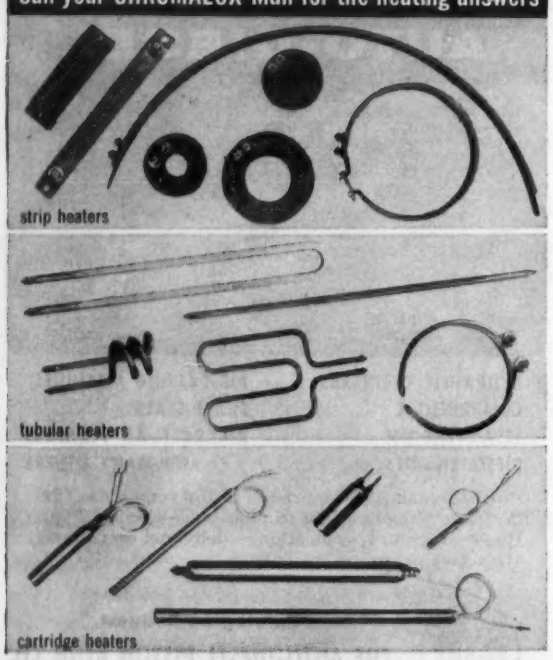
Call your CHROMALOX Man for the heating answers



These 3 basic CHROMALOX heaters provide answers to just about any heating problem

Strip Heaters . . . that quickly and easily bolt or clamp to metal surfaces.

Tubular Heaters . . . that clamp on, fit into machined grooves, cast into metals, immerse in liquids, install in ovens and ducts.

Cartridge Heaters . . . that fit standard drilled holes.

These versatile Chromalox electric heaters come in sheath materials, sizes and wattages to match almost any application to 1100°F. Easy to install, they provide fast, clean, safe, economical heat for limitless applications.

Your Chromalox Man can help you determine the one that best answers your problem. Why not give him a call.

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CHROMALOX
Electric Heat
INDUSTRIAL • COMMERCIAL • RESIDENTIAL
EDWIN L. WIEGAND COMPANY
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A protective corrosion-resistant coating for pipeline and steel tubing above or below ground is provided by No. 632 and 633 Anchor pressure-sensitive tape. First is for standard service, and second tape is used where additional thickness and toughness is required as for river crossings and off-shore installations. Usable on straight pipe, fittings, joints, and other areas, it can be hand or machine applied. Specification and field service is offered. Made by **Continental Tapes**, Cayce, S. C.

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IMMEDIATE SHIPMENT FROM STOCK

Aluminum ROLLER Conveyors. A choice of roll lengths and spacings makes it easy to assemble a conveyor to your exact need. *Aluminum WHEEL Conveyors.* Ready to ship from stock, in 12" and 18" widths with 10 wheels per foot. Logan Aluminum Conveyors are lightweight, easy to handle; an ideal choice where portable conveyors are desired. Write for catalog on complete line.

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Logan Conveyors

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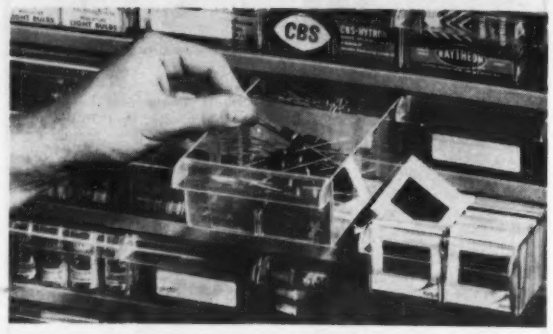
Conserve valuable space, reduce costly "looking" time with Akro-Mils Small Parts Storage Cabinets. 102 Stock models available, others can be built to your specifications.



Complete study in the science of efficient small parts storage for offices, factories, laboratories, homes.

SEND FOR FREE STUDY! Ask for Bulletin F. S.

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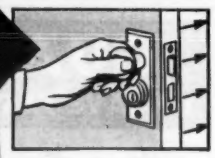
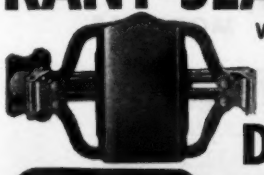


KANT-SLAM



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HYDRAULIC DOOR CHECK

ONLY $10.95

CLOSES Doors—large or small; Gates; Screen Doors . . . Gently—Smoothly—Positively.
STOPS Slamming . . . Banging . . . Broken Door Glass.
PREVENTS Heat Loss in Winter, Air-Conditioning Loss in Summer, Insects, Drafts

Used by Hundreds of Famous Firms: Oak Ridge Atomic Energy Plant; University of North Carolina; A & P; United States Steel; General Electric; Rutgers University; Fuller Brush Co.; Carnation Co.; Shell Oil Co.; Kraft Foods, etc.

Smooth hydraulic action—*not an air check*—piston works in oil, yet KANT-SLAM costs about ½ the price of other hydraulic door controls. Extraordinary **3 year guarantee!** Works anywhere along hinge side of door, top to bottom—either right or left hand door . . . Entirely self-contained, exerts no strain on doors or hinges. Holds door open when past 90°. Only 1 size check needed—3 sizes easily interchangeable springs available for various size doors. Simple screw adjustment for closing speed. Attractive finish—Dark bronze metallic lacquer, hammer effect.

FREE TRIAL! Order KANT-SLAM now on 30-day FREE TRIAL at only $10.95 F.O.B. Bloomfield, Ind. Write for details.

KANT-SLAM DOOR CHECK CO., 379 W. Spring St., Bloomfield, Ind.

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Compress 8 barrels of trashpaper into one . . . E-Z BALER!

Eliminate the dangerous, unsanitary, unsightly clutter of loose trashpaper with the new, improved E-Z BALER. Occupies only 24" of floor space. Very inexpensive. Ideal for factories, motels, hotels, offices, schools, hospitals, stores, apartments, etc.

GET THESE BIG E-Z BALER ADVANTAGES

- REDUCE FIRE HAZARD
- AVOID UNSANITARY TRASH CONDITIONS
- REDUCE TRASH DISPOSAL COSTS
- SAVE FLOOR SPACE

THE E-Z BALER IS EXTREMELY EASY TO OPERATE
Lid swings open and trash paper is thrown in. Crank handle forces lid down through container, pressing trash to bottom of baler. Compressed trash is then wired and removed.

Write for descriptive literature

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GLIDER® Vertical Blue Print Files

Up to 1800-print capacity

GLIDERS merge functional design with the strength of steel for faster filing of more plans in less space. Within the straight line styling of gleaming gray GLIDER frames, there are other "profit-abilities"

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GLIDER plan holders, 20" to 48" long, hold up to 100 prints each. Spaced thumbnuts provide direct clamp control. Single and multiple sheets or sets are held equally firm.

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"T"-tops of each plan holder "glide" into and out of, rigid, steel channel-tracks. As print quantity increases, users add extra plan holders. A capacity of 1800 prints may be retained in the GLIDER 48" x 36" x 60".

EXTENDABILITY

For greater plan filing purposes, there are GLIDER Extensions. Available in 32" and 48" lengths, they're easily attachable to original GLIDER units or other Extensions. Filing space is increased by one, or more, of the same units at reduced cost.

There are a variety of GLIDERS, open or in cabinets. For the do-it-yourselfer or users with special space problems, plan holders and channels are offered separately. Save time, motion, space and your plans with GLIDERS. Call or write for literature, prices and nearest dealer.

*Patented by MOMAR Industries

MOMAR Industries
4323 West 32nd Street Chicago 23, Illinois
Phone: Atwater 3-1633

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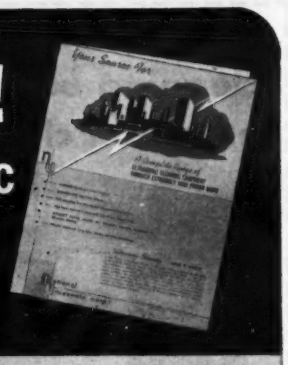

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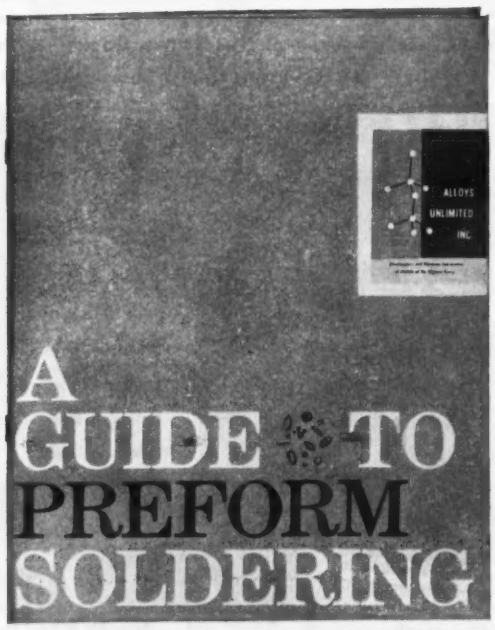

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Complete information on solder preforms, their selection and use. Technical diagrams. Send for your copy today.

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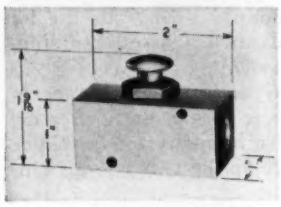
CABINET BENCH
redesigned unit has reversible top

Added versatility results from the reversible top now embodied in the redesigned cabinet bench. Vises, small grinders, and all types of office machines can be mounted on this steel bench which also provides 12-sq ft tool or parts storage area. Double swinging doors have three-point locking device. Center shelf is adjustable on 1½-in. centers. Bench is 36 in. wide, 24 in. deep, and 34 in. wide. The 2-in. high back and end stops are integral part of top which can be inverted and reversed to provide a flat working area. Bench has baked green enamel finish. Made by **Lyon Metal Products, Inc.**, 7 Plant Ave., Aurora, Ill.

▲ For more details circle **NED-40 J9** on enclosed inquiry slip ▲

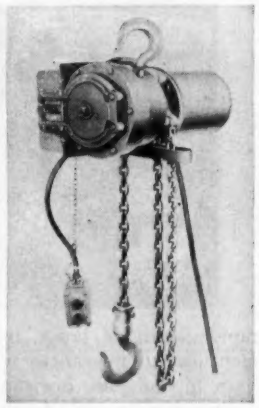
AIR CONTROL VALVE
is three-way palm-button unit



Suited for 0 to 200-psi pneumatic service, this three - way palm - button actuated valve has full ⅛ and ¼-in. orifices. It is of corrosionproof single-poppet design and is made with aluminum body and brass parts. Mountable in any position, it lists for $3.50. Made by **Airmatic Valve, Inc.**, 7317 Associate Ave., Cleveland 9, Ohio.

▲ For more details circle **NED-41 J9** on enclosed inquiry slip ▲

ELECTRIC HOISTS
12 models from ½ to 3 tons capacity



Twelve models ranging in capacity from ½ to 3 tons and with speeds from 9 to 36 fpm comprise the improved and expanded line of Coffing S Series heavy-duty Quik-Lift electric hoists. Both pushbutton or pendent controls allow load movement of a fraction of an inch. Enclosed gear housing is permanently packed with grease. Features include a dual voltage motor, oversize instantaneous shoe - type brake which can be operated manually if power fails, and alloy steel link-type coil chain. Either hook or multipurpose lug suspension is offered. Made by **Duff-Norton Co.**, Coffing Hoist Div., 800 Walter St., Danville, Ill.

▲ For more details circle **NED-42 J9** on enclosed inquiry slip ▲

Aftercooler and Cyclone Separator designed for cleaner, dryer compressed air

The Adams Aftercooler and Cyclone Separator are designed to efficiently condense and remove water from compressed air and process gas. Condensed moisture and entrained dirt and oil are subsequently removed in a cyclone type separator. This unit is scientifically designed for maximum removal efficiency over a wide range of flow rates.

For normal use, units are available to cool gases to within 10° F of the temperature of the cooling water. Specially designed units are available to permit a 2° F approach to cooling water temperature, for application where low moisture content is critical.

Adams Aftercoolers and Separators are available from stock to handle 20 - 40,000 cfm with 10° cooling and 25 - 19,200 cfm where it is necessary to cool within 2°F of the cooling water. Special units can be supplied to suit an unlimited range of requirements. In all cases the maximum pressure loss at rated capacities is ½ psi.

This wide range of sizes enables the economical utilization of Adams Aftercoolers and Separators in virtually all industrial application. For further information on how R. P. Adams' units will solve your compressed air problems and save you money, write today for Bulletin 711. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *Advt.*

▲ For more details circle **NED-43 J9** on enclosed inquiry slip ▲

STOP SLIPPING ON FLOORS, RAMPS, STEPS, CATWALKS...trowel on Flintdek*!

- Available in tile red, green, blue, cement gray and high visibility yellow for all walking areas.
- Resists water, gasoline, oil, alcohol, fats, dilute acids and alkalies.
- Doesn't chip, crack or peel over metal, wood or concrete. Covers 50 sq. ft. per gallon.

For particulars on Flintdek safety coating write: The Flintkote Company, Industrial Division, 30 Rockefeller Plaza, New York 20, N. Y.

*Reg. U.S. Pat. Off.

FLINTKOTE

Manufacturer of America's Broadest Line of Building Products

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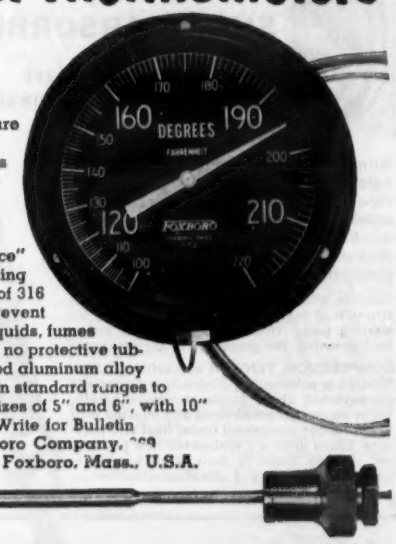
"Lifetime" Dial Thermometers



You're always sure of accurate temperature readings with this easy-to-read Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed aluminum alloy case. Available in standard ranges to 1000°F. — dial sizes of 5" and 6", with 10" and 12" scales. Write for Bulletin 14-11. The Foxboro Company, 299 Neponset Ave., Foxboro, Mass., U.S.A.

FOXBORO Reg. U.S. Pat. Off. DIAL THERMOMETERS

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WELDERS! push this button and save!

. . . as much as 30% on fuel gas! . . . as much as 10% on oxygen . . . and 16% on labor in typical case history!

It's *SMITH'S money-saving gas control unit*—ideal for flame cutting, welding, silver soldering, production brazing . . . any job that takes a high pre-heat flame to start and a lower flame to finish. Also ideal as a shut-off valve for inert gas welding! Unit works on a solenoid-operated valve . . . plugs into any 110 volt line. Use with as many as 8 machine cutting torches (pays for itself over and over again). For maximum convenience, order with either a hand or foot operated remote control. Send today for complete information:

SMITH'S **PUSH-BUTTON GAS CONTROL**
SMITH WELDING EQUIPMENT CORPORATION
2633 Fourth Street, S.E., Minneapolis 14, Minn.

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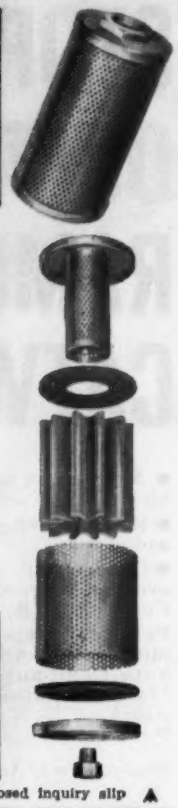
New GENERAL SUMP FILTER



Removes Lint, Dirt, Sludge from Hydraulic and Lubricating Oils

5 SIZES . . . 8 to 50 GPM! Meets J.I.C. Standards—3000 Series General Filters have a heavy-duty, compression sealed, perforated metal housing which resists corrosion, cleans easily, assures maximum flow rates with minimum pressure drop. Standard pleated element is 100-mesh monel — others optional. Install filter individually or in *multiples* for greater capacity.

WRITE for Catalog Sheet 1369.

GF—1394

GENERAL FILTERS, INC.
43800 Grand River Avenue
Novi, Michigan
IN CANADA: Canadian General Filters, Ltd., 39 Crockford Blvd., Scarborough, Ontario

▲ For more details circle NED-47 J9 on enclosed inquiry slip ▲

NEW CUSHION CHAIN SHOCK ABSORBER

NOW PROTECT MACHINERY AND EQUIPMENT, BANISH BREAKDOWNS with this remarkable new device.

"the chain is always there"

Simple—permanent—inexpensive! Eliminate shock loads! For chain, cable, wire rope. • For hoists, draglines, booms, snaking or logging. • For towing or tie-down. • For ships, barges, buoys. • For tensioning devices, snubbing, shock absorption.

Cushion characteristics of rubber—ultimate strength of high tensile alloy steel chain. No wearing parts. Nothing to get out of order. No tightening. No greasing. No maintenance!

COMPRESSION, TENSION and SHEAR CUSHIONING is achieved by contracting a specially dimensioned chain to its minimum length, set in unique patented mold and injected with tough rubber compound under heat and pressure. Chain links are embedded in a permanent durable bond in contracted position—the perfect shock and vibration absorber.

HIGH CAPACITY IN SMALL SPACE

Far more efficient than mechanical, pneumatic or hydraulic devices. Example: a 2" square Cushion Chain is equivalent to 8" diameter steel spring with 1⅛" wire!

For details write:
BRANDON EQUIPMENT COMPANY, INC.
332 S. Michigan Ave., Chicago 4, Ill.

▲ For more details circle NED-48 J9 on enclosed inquiry slip ▲

Compliments of your nearby Wilcox-Crittenden distributor

Our distributors tell us that you will welcome an easy-to-use catalog which shows and describes the full W-C Industrial Hardware Line. Included is the most popular line of drop-forged hardware plus many "must" items for any shop.

Ask for Catalog No. 300. If your next door distributor doesn't have one for you, write us. We'll see that you get it pronto.

WILCOX-CRITTENDEN
Division, North & Judd Manufacturing Co.
67 SOUTH MAIN ST., MIDDLETOWN, CONN.

▲ For more details circle NED-49 J9 on enclosed inquiry slip ▲

MERCURY CONTACTORS in 60 and 100-amp ratings

Mercury-to-metal (tungsten) contacts are featured in line of Mercury Hypressure contactors offered in 60 amp, 6.6 kw-T and 100 amp, 10 kw-T load ratings. Normally open or normally closed contacts, and any coil voltage are available. These hydrogen arc-quenched contactors are suitable for lighting, or the switching of heavy motor loads, and will handle direct as well as alternating currents. The 60-amp units are priced from $8.50; the 100-amp units from $19.00. Made by **Durakool, Inc.**, 1051 N. Main St., Elkhart, Ind.

▲ For more details circle NED-50 J9 on enclosed inquiry slip ▲

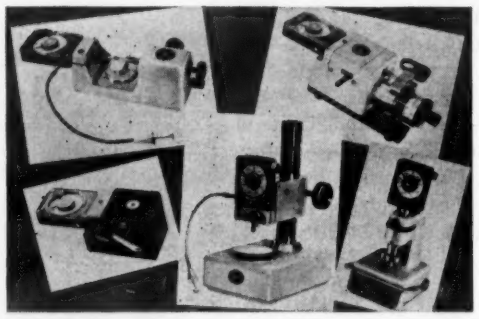
GLASS-MELAMINE LAMINATE is moistureproof electric insulator

Qualifying under Mil-P-15037 spec, Grade FF-60 glass melamine laminate is also approved for Navy GME applications. This latter approval permits its use for circuit breakers, panel boards, switch bases, and shipboard electric systems. It retains 70 per cent of its dielectric strength after 336 hours of immersion in water. Insulation resistance is 20,000 ohms after exposure to 90 per cent relative humidity for 96 hours. Made by **Formica Corp.**, 4620 Spring Grove Ave., Cincinnati 32, Ohio.

▲ For more details circle NED-51 J9 on enclosed inquiry slip ▲

PRECISION GAGES for bores, recesses, and grooves

Micro dial indicator on each of five Kwik-Chek precision measuring gages is jeweled and features both zero and tolerance-pointer adjustments. Gages permit



rapid gaging of bores, recesses, grooves, and other dimensions to tolerances within 0.00005 in. Clockwise, from top left, are horizontal jaw, horizontal indicating micrometer, recess depth, precision dial comparator, and small bore gages. Metric dials and custom features can be specified. Made by **Hamilton Watch Co.**, Industrial Div., Lancaster, Pa.

▲ For more details circle NED-52 J9 on enclosed inquiry slip ▲

ANNOUNCING

The new **CRATEX**
TOOL & DIE MAKERS KIT

The world's finest rubberized abrasives for deburring, smoothing and polishing tools, dies, patterns, molds, models, instruments and component parts.

Kit contains 80 wheels and points in the most popular sizes and shapes, equally assorted in four grit textures, coarse (C), medium (M), fine (F), extra fine (XF)... plus four mandrels for ⅛" chuck... packaged in plastic box, compartmented for fast selection. $7.50 complete.

Order your new Cratex Tool & Die Makers Kit #777 through your distributor—or, send your order to us for delivery by the Cratex distributor nearest you.

CRATEX *Free 8-page catalog available on request.*
MANUFACTURING CO., INC.
1600 ROLLINS ROAD, BURLINGAME, CALIFORNIA

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unexcelled economy for
HEATING and PROCESSING...

Continental

2-PASS AUTOMATIC BOILERS

NEW!

20-600 hp; 15-250 psi.

The 2-Pass design of the Continental Boiler is the most practical and economical approach to heat transfer in Packaged Boilers today. Costly flue-gas directing baffles and doors are not required. Inspection and maintenance costs are a minimum. The Continental 2-Pass design is a simple, practical proven feature that means important savings for the life of the boiler.

SEND FOR THIS DATA FILE . . .
Get the facts on how a Continental 2-Pass Automatic Boiler can solve your problems. Write today on your company letterhead to Dept. NED-9 for latest data.

Over a half century of boiler building experience

CONTINENTAL BOILER DIVISION OF BOILER ENGINEERING & SUPPLY CO., INC.
Phoenixville, Pennsylvania

Nation-wide Sales and Service in Principal Cities

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CIRCO ultrasonic cleaning units achieve precision cleaning... IN SECONDS!

Model BC60
Capacity 1¼ gal.
$350

Whenever **absolute** product cleanliness is a critical factor...whenever cleaning is a production bottleneck ...whether you need a bench model or a huge custom-designed conveyerized system, CIRCO engineers can recommend the specific CIRCOSONIC unit to solve your problem. Write for your free copy of "Tips on Ultrasonic Cleaning".

CIRCO ULTRASONIC CORP.
Specialists in Ultrasonic Energy
51 Terminal Ave., Clark, New Jersey • FUlton 8-8600

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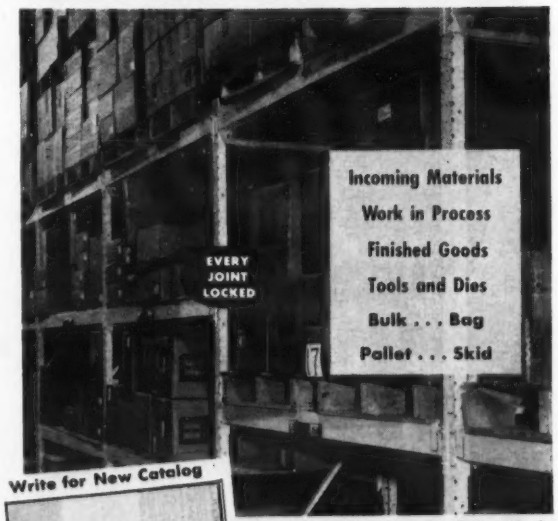
MORE . . . Storage in the Same Space with speedrack® Adjustable Storage Racks



Prefabricated . . . Assemble Without Tools

Write for New Catalog

STORAGE PRODUCTS CORPORATION
4406 Oakton St.
Skokie, Illinois

speedrack SAVES SPACE

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Disowheel® "press-ons" wear longer under tougher conditions

When you put on tough, wear-resistant Disogrin "press-ons" you stretch a few months service into a year or more. And the tougher the floor conditions, the greater advantage of Disogrin wheels. Because of their superior resiliency, Disogrin "press-ons" give a smoother ride for operator, truck and load. A ride that means less operator fatigue, fewer breakdowns, less load damage. Available in all sizes up to 22". Write today—we'll send you a practical wheel analysis chart and complete information on DISOWHEEL.

DISOGRIN INDUSTRIES

510 SOUTH FULTON AVENUE • MOUNT VERNON, NEW YORK
Offices: Los Angeles • Boston • Chicago • Cleveland • Washington
Distributors everywhere

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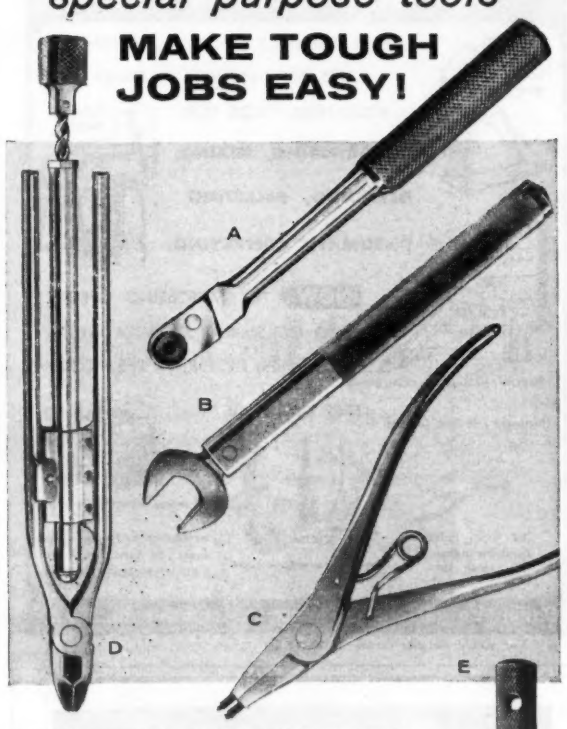
MILBAR

special purpose tools

MAKE TOUGH JOBS EASY!



A. MILBAR CLOSE-CLEARANCE RATCHET WRENCH for tightening or removing twelve-point or hex-head screws and nuts. Fits in the tight spots where regular wrenches won't work. Smooth ratchet action. Several sizes available. Widely used in aircraft and missile industries.

B. MILBAR SNAP TORQUE TOOL—with pre-set torque. A "click" you can feel and hear tells when proper torque is reached. A choice of head types for specific jobs. Widely used on production lines in the automotive and aircraft industries.

C. MILBAR SNAP RING TOOL—the original and most widely used tool with replaceable points of different shapes and sizes. Tool lasts forever—just change points for the job at hand or when they wear out. Special points for holeless snap rings.

D. MILBAR WIRE TWISTER—for smooth, automatic one-hand operation. Extra large serrated jaws assure a longer life and non-slip grip. Spring return and squeeze release eliminates need for shifting hands. Twists and cuts wires with no waste motion.

E. MILBAR GEARED RIGHT-ANGLE TOOL—for easy access to "tight" spots. Fits all standard ⅜" drive extensions, sockets and ratchets. Reaches around corners and delivers increased torque for tightening or removal. Eliminates unnecessary removal of parts to get at the job to be done. Fully proven and tested by thousands of users.

Send for your free brochure describing these, and other, MILBAR Special Purpose Hand Tools. MILBAR has the engineering facilities and personnel to solve your special problems where sufficient volume is involved.

MILBAR CORPORATION
1900 EUCLID AVENUE • CLEVELAND 15, OHIO

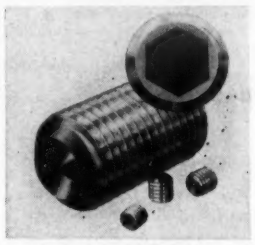
▲ For more details circle NED-58 J9 on enclosed inquiry slip ▲

LOCATOR LIGHT
for drill presses, other machines

Work area on terminal setters, punches, riveting machines, drill presses, and similar equipment is pinpointed accurately and quickly with a beam of light from the Locolite. The low cost locator light is useful in operations where the desired spot is hidden by the work itself. The adjustable 3½-in. long light is offered with transformer, prism, bulb, and bracket. Made by **Black & Webster, Inc.**, Dept. N26, 570 Pleasant St., Watertown 72, Mass.

▲ For more details circle NED-59 J9 on enclosed inquiry slip ▲

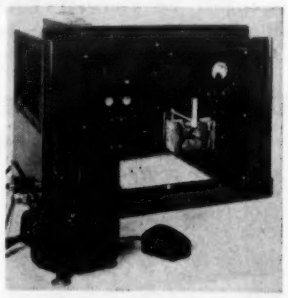
SOCKET SETSCREW
cone point keeps screw centered



Centered within the cup edge of the W-point socket setscrew is an integral conic point which makes contact with engaged work before the cup edge. This fixed point prevents oscillation of the cup edge and minimizes the tipping effect of key tightening. Screw tracks evenly for positive frictional contact of both flanks of the cup with the engaged work. Resistance to rotary slippage and to vibration is substantially increased. Made by **General American Transportation Corp.**, Parker-Kalon Div., Clifton, N. J.

▲ For more details circle NED-60 J9 on enclosed inquiry slip ▲

450-KC GENERATOR
is 2-kw induction heating unit



Hardening, brazing, soldering, forging, and annealing are typical uses for the Model 150 bench type induction heating generator, a 2-kw unit with frequency rating of 450 kc. Other frequencies are available. Transfer switch operates two work coils, permitting the operator to heat objects alternately. Foot switch and variable output control are accessories. An automatic timer can be preset for production line work. Generator weighs 250 lb, measures 28 x 19 x 21 in., and has a 220-v, 60-cycle, single-phase power input. Only moving part is a 200 cfm blower. Made by **Induction Heating Corp.**, 181 Wythe Ave., Brooklyn 11, N. Y.

▲ For more details circle NED-61 J9 on enclosed inquiry slip ▲

RECIPROMOTORS AND SEMOTORS

AX-426 RECIPROMOTOR

A Reciprocator is a rectilinear induction motor. A Semotor is made up of a Reciprocator acting upon a thin disk of copper or aluminum to make it rotate or oscillate. Reciprocators may be furnished for practically any force and any length of stroke. They are used for any operation requiring reciprocating forces of various magnitudes. Semotors may be used for operating butterfly valves, clutches, indexing tables, and any other mechanism requiring simple oscillating motive units. Send for Bulletin EE-157 for more explanation.

We also make many standard lines of solenoids; we also make complete replacement lines of solenoids to replace General Electric and National Acme lines of solenoids; we also make solenoid operated shoe brakes for torque capacities ranging from 3 ft-lbs. to 24,000 ft-lbs.

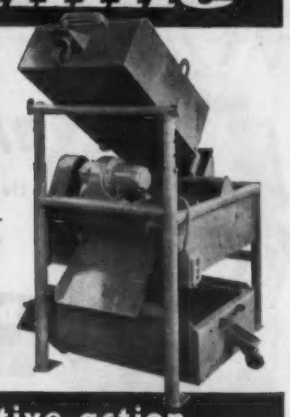
Send for more information. See our catalogs in Sweet's Catalog Service.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE ST. • MILWAUKEE, WIS.

▲ For more details circle NED-62 J9 on enclosed inquiry slip ▲

Techline®

NEW MAGNETIC SEPARATOR



Low-cost positive action

New — the most economical and efficient magnetic type separator for all barrel finishing media and ferrous parts. Handles large or small parts. Power operated, complete. Occupies minimum floor space. For permanent or portable installation.

Techline® division of **WHEELABRATOR** Corporation

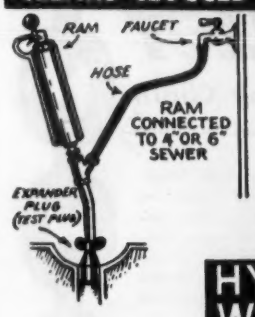
Where precision finishing is a science

Write for Bulletin 402 Showing Full Line of Techline Separators

2456 Avenue V
Vicksburg, Mich.

▲ For more details circle NED-63 J9 on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent or no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, plus set of 5 tapered adaptor plugs for other drains or sewers.

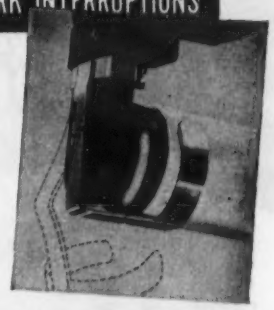
Write for Information, Prices, Free Trial Offer — Today!

HYDRAULIC MANUFACTURING CO.
214 INDUSTRIAL HEIGHTS KIEL, WISCONSIN

▲ For more details circle NED-64 J9 on enclosed inquiry slip ▲

STOP! INJURIES AND WORK INTERRUPTIONS

from falling fluorescent-tube accidents



Fluorescent tubes sometimes fracture. Vibration and shock may release them from fixtures. Wherever fluorescent lighting is installed there is the possibility of physical injury and property damage resulting from falling tubes.

Don't wait for accidents to happen. For a few cents each you can keep tubes in place, prevent falling, insure against poisoning, contamination and spoilage, avoid injuries, work interruptions and loss of time.

Install Den-El fluorescent lamp guards, easily and quickly, with a screw driver. Permanent, positive protection. Stainless steel. Easily sprung aside for relamping or cleaning. Two guards for each lamp.

Types for all fixtures, also tubes in series
For 40W tubes, per C $19.00
For 100W tubes, per C $22.50

ORDER TODAY DIRECT

Ask for bulletin, also complete General Scientific catalog of hundreds of other safety equipment items

All orders shipped promptly from Philadelphia

GENERAL SCIENTIFIC EQUIPMENT CO.
7518 Limekiln Pike, Phila. 50, Penna.
HAncock 4-1550

SAFETY EQUIPMENT FOR EVERY HAZARD

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COOL BREATHING

IN HOT, SMOKY OR DUSTY AIR VAPORS, FUMES

DUPOR No. 20 Water Cooled RESPIRATOR

Double sponge filters, saturated with water before wearing, give individualized air-conditioning unit that makes breathing safe for every worker. Paint shops, foundries, steel mills, chemical labs, oil refineries, etc. use and recommend this respirator, one of many proven DUPOR models. See your safety equipment supplier or order sample direct — $2.50 postpaid.

WRITE FOR LITERATURE ON OTHER MODELS

H. S. COVER
Dept. 905, South Bend 14, Ind.
"Respirators for Industry Since 1894"

For more details circle NED-69 J9 on enclosed inquiry slip

HERC-ALLOY
The Original Alloy Chain

● Has many superior features—is lighter, therefore easier to handle...is long wearing...has high resistance to impact loading...is Inswell welded. Chain and all fittings are 125,000 p.s.i. tensile strength alloy steel.

● Write for Bulletin 100 covering Herc-Alloy Sling Chains, including helpful information on their care, use and inspection.

● Sold in running lengths, slings assembled to customers' specifications and other special assemblies.

CM CHAIN

COLUMBUS McKINNON CHAIN CORP.
TONAWANDA, NEW YORK
NEW YORK • CHICAGO • CLEVELAND
SAN FRANCISCO • LOS ANGELES
In Canada: McKinnon Columbus Chain Ltd., St. Catharines, Ont.
HERC-ALLOY®

For more details circle NED-70 J9 on enclosed inquiry slip

DiaTest SMALL BORE GAGES in NEW, wide range OF SIZES!

DIAMETERS: .057" to 1.130"
ACCURACY: .00008"

Four sets (6 to 9 measuring heads each, 6 to 9 setting rings, 1 Dial Indicator, etc.) cover range .057 to 1.130".

DiaTest gages check out-of-round, tapers, incomplete bores and all other variations.

RIGHT ANGLE ATTACHMENT, EXTENSION RODS, DEPTH ADJUSTER, and SPECIAL HEADS to measure flush to the bottom of closed holes, are useful additional accessories.

All parts obtainable separately.

Write today, or call NEwcastle 1-8888 for full information!

FOSTER SUPPLIES CO.
6122 MILWAUKEE AVE., DEPT. NED.
CHICAGO 46, ILLINOIS

For more details circle NED-71 J9 on enclosed inquiry slip

PRESSURE SWITCH opens, closes electric circuits

Control and warning systems are actuated by the Pressurmite Model 655, a 2-in., 2¼-oz absolute pressure switch which automatically opens and closes electrical circuits. Its only moving part is the pressure-sensing diaphragm. One of two precious metal contacts in a sealed chamber, encased within a plastic housing can be adjusted for response to a preset pressure. Several elements can be enclosed in one housing and set to operate at different pressures. Operating range is −85 to 300° F, pressure range setting is from 2 to 14.7 psia (sea level to 50,000 ft altitude); and contact rating is dependent upon the application. Consistent performance is obtained at 0.2 amp, maximum at 28 v. Made by **Bendix Aviation Corp.**, Friez Instrument Div., 1400 Taylor Ave., Towson, Baltimore 4, Md.

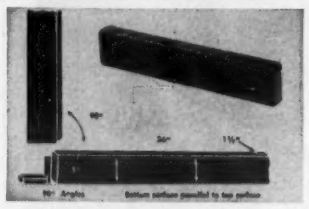
For more details circle NED-72 J9 on enclosed inquiry slip

LIQUID LEVEL GAGE measures level ultrasonically

Level of liquid nitrogen, slurries, thick oils, fused salts, molten metals, and many other liquids is measured ultrasonically by the Metasonic system. Output is either digital or continuous and adaptable to recording, control, proportioning, and blending. Principle employs solid metal acoustic wave guides, and ignores or cancels the effect of the liquid and its properties on the accuracy of level measurement. System is fully transistorized. Developed by **General Ultrasonics Co.**, 6 Tobey Rd., Bloomfield, Conn.

For more details circle NED-73 J9 on enclosed inquiry slip

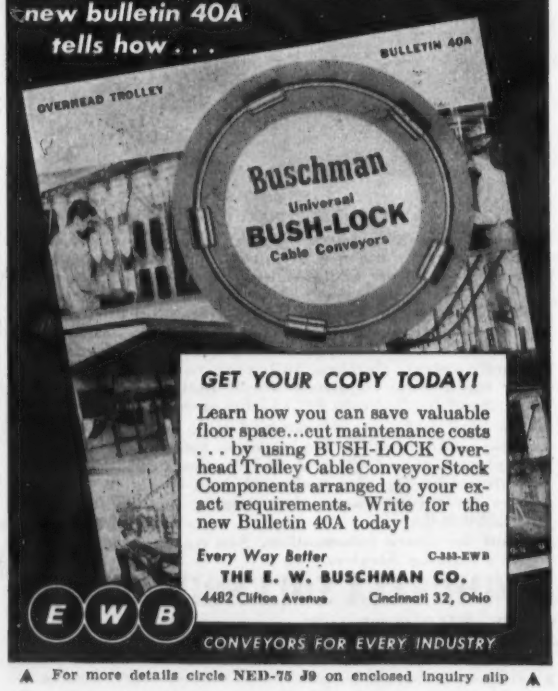
GRANITE STRAIGHTEDGE available in three grades



Squareness, parallelism, and straightness are checked with this parallel straightedge of black granite with 90-degree angle sides. Three grades are offered: 0.000025 in. (laboratory grade); 0.000050 in. (inspection grade); and 0.000100 in. (tool room grade). Size is 1½ x 5 x 36 in. Made by **Collins Microflat Co.**, 3249 El Segundo Blvd., Hawthorne, Calif.

For more details circle NED-74 J9 on enclosed inquiry slip

HOW TO CUT COSTS with CABLE CONVEYORS
new bulletin 40A tells how . . .



GET YOUR COPY TODAY!

Learn how you can save valuable floor space...cut maintenance costs . . . by using BUSH-LOCK Overhead Trolley Cable Conveyor Stock Components arranged to your exact requirements. Write for the new Bulletin 40A today!

Every Way Better C-353-EWB
THE E. W. BUSCHMAN CO.
4482 Clifton Avenue Cincinnati 32, Ohio

E W B
CONVEYORS FOR EVERY INDUSTRY

For more details circle NED-75 J9 on enclosed inquiry slip

PEAK EFFICIENCY FOR YOUR MACHINE THROUGH PRODUCTION CONTROL AND PREVENTATIVE MAINTENANCE with the

VDO TACHOGRAPH

What is the Tachograph?
This instrument records in chart form *when* and *how fast* any machine operated or how long it took to complete a process.

What does the Tachograph do?
This precision instrument keeps a running record of how fast your equipment has been operating at any given time and total time.

How can the Tachograph help you?— The VDO Tachograph locates and corrects bottlenecks by helping to relocate men and equipment to areas of necessity. Usable for time studies and to evaluate and reduce costs.

OTHER ENGLER INSTRUMENTS

HOUR METER . . . AC-DC

Electrically registers hours and minutes of engine operation. For use on any powered equipment — DC powered rolling stock or stationary machines on AC line current.

PRODUCTOLOG . . .

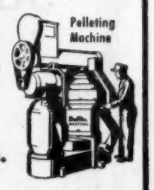
Electrically records in chart form off and on time of any machine or process. Shows on chart exactly when down time occurred and for how long. Access window enables operator to write in the reason for stoppage.

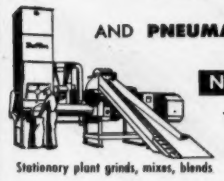
Engler Instrument Co.
Dept. NE, 280 Culver Avenue Jersey City 5, New Jersey

For more details circle NED-76 J9 on enclosed inquiry slip

NOW Daffin EQUIPMENT for CHEMICALS PROCESSING AND HANDLING

THE EXCELLENCE OF THESE MACHINES HAS BEEN PROVEN IN OTHER INDUSTRIAL FIELDS FOR GRINDING, MIXING, BLENDING, PELLETING AND PNEUMATIC CONVEYING.





NOW THEY ARE BEING OFFERED TO DO SIMILAR CHEMICAL JOBS EASIER, FASTER, AT LESS COST!

FREE CATALOGS.

All units also available in stainless steel construction.

Installation by Factory Engineers. 24 Service-Parts Depots strategically located.

Daffin Mfg. Co., 3950 N. Prince St., Lancaster, Pa., U.S.A.

For more details circle NED-77 J9 on enclosed inquiry slip

CABLE STRAPPING CAN NOW BE DONE
• Quickly • Permanently • Accurately

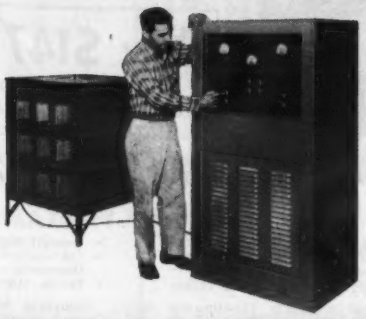
with PVC or NYLON
No more costly tying

If you have a cable strapping or marking problem . . . send today for samples and catalogues, to:

HELLERMANN CORPORATION
701 SENECA ST. • BUFFALO 10, N.Y.

For more details circle NED-78 J9 on enclosed inquiry slip

CLEANING PROBLEM?
SONOCEN® Ultrasonic Cleaners by BRANSON may be your answer!



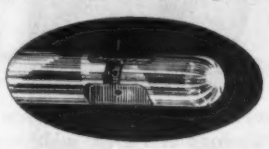
Experienced counsel in planning, installation, and maintenance of ultrasonic cleaning systems. Wide range of standard, use-proven units combine into efficient cleaning systems with any needed features and capacity from benchtop size to the largest engineered batch or conveyorized installation. Assured nationwide service by factory-trained specialists. Tell us your problem.

BRANSON ULTRASONIC CORPORATION
56 Brown House Road • Stamford • Connecticut

▲ For more details circle NED-79 J9 on enclosed inquiry slip ▲

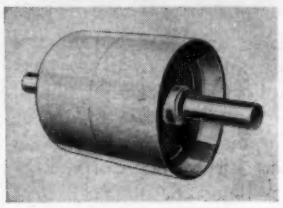
VELOCITY MEASURING PROBE for investigating fluid flow

Readily inserted through a 1/8-in. hole in pipelines as well as in fluid flow machinery such as turbines, compressors, and burners, this three-dimensional probe permits measuring velocity accurately. It has five pressure orifices on the tip which, directly or through calibration curves, can be used to determine total pressure, static pressure, yaw angle, and pitch angle flow properties at any point. A 3/16-in. diameter variation has a thermocouple to add temperature measurements to the other checks. Typical uses include mapping of stream-lines and determining whether flow is straight or curved, and where unexpected pressure losses occur. Made by **United Sensor & Control Corp.**, Box 127, Glastonbury, Conn.



▲ For more details circle NED-82 J9 on enclosed inquiry slip ▲

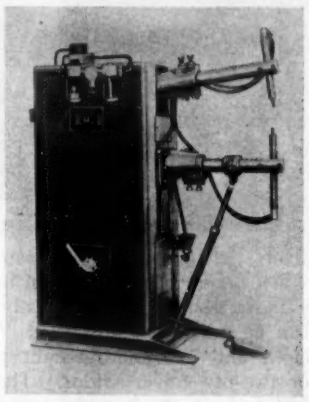
MAGNETIC PULLEY incorporates ceramic magnets



High magnetic strength across the entire width of a conveyor belt is assured by the Perma-Pulley, a permanent magnetic pulley which incorporates Ceramox V ceramic magnet material. Stainless steel construction provides all-weather service. Pulley is the radial pole type which requires no maintenance. Made by **Dings Magnetic Separator Co.**, 4740 W. Electric Ave., Milwaukee 46, Wis.

▲ For more details circle NED-83 J9 on enclosed inquiry slip ▲

SPOT WELDERS operation, maintenance simplified

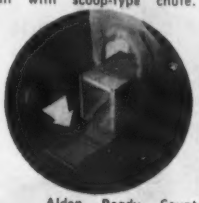


Improved line of single-phase resistance type Rocker Arm spot welders features nylon trunnion bushings that never require oiling and contact switches that do not need adjustment. Made in both air actuated and foot operated models, welders are rated from 10 to 75 kva with throat depths from 12 to 36 in. Timing sequence and heat adjustments provide for the high-speed resistance welding of all types of weldable metals. Units have heavy duty frames. Made by **Electric Arc, Inc.**, Universal Electroweld Div., 152-1 Jelliff Ave., Newark 8, N. J.

▲ For more details circle NED-84 J9 on enclosed inquiry slip ▲

INCREASE PRODUCTION . . . .
Deliver Parts to Finger Tip Reach

Medium with tray-type chute; small with scoop-type chute.



Alden Ready Count Containers slip onto Holder Feed Chutes.

Alden Containers with Fan-Type Layout; hand movements are under 3 inches.

Alden "Ready Count" Parts Containers provide for: Delivery of parts to points of use; maximum quantities in minimum space; visual audit for quick checking. They are made of metal with a transparent front panel of plastic. Inventory and identification tabs may be slipped onto the top. Tare weight label insures accurate counts by weighing. Pitched bottom insures positive delivery to the last part. Quantity level marks make visual audits easy. Color is precision gray.

SEE FOR YOURSELF WITH A TRIAL ORDER . . . . .

ALDEN "READY COUNT" CONTAINERS		
5403-A	SMALL 3⅛" x 2¾" x 4"	$1.60 EA.
5402-A	MEDIUM 7⅛" x 2¾" x 4"	1.85 EA.
ALDEN "HOLDER" FEED CHUTES		
5400-1A	TRAY TYPE	.75 EA.
5490-2A	SCOOP TYPE	.85 EA.
(F.O.B. BROCKTON, MASS.)		

Other sizes available. Write for your free copy of the New Alden Systems Handbook for the complete Alden Systems Story.

ALDEN SYSTEMS COMPANY
ALDEN RESEARCH CENTER P. O. BOX 125 WESTBORO, MASS.

▲ For more details circle NED-86 J9 on enclosed inquiry slip ▲

It's Here! **NYE Sliding Jaw PIPE *RENCH**

*SO NEW we decided to spell it differently.

WILL NOT SLIP ...WILL NOT LOCK

Sliding lower jaw with floating action tightens under pressure. Can't slip . . . can't lock because floating jaw slides off as rench is lifted from pipe. And jaw automatically adjusts to size of pipe and coupling. Speeds up work.

NYE TOOL COMPANY
4126 Fullerton Ave., Chicago 39, Ill.

▲ For more details circle NED-80 J9 on enclosed inquiry slip ▲

RECEIVING...PRODUCTION... WAREHOUSE...SHIPPING... MAINTENANCE

every department can use the CM CYCLONE HIGH-SPEED—HEAVY DUTY—ALUMINUM ALLOY CHAIN HOIST

CAPACITIES: ¼ TO 10 TON

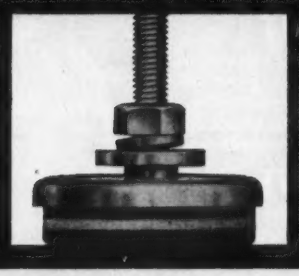
● Help your men get lifting jobs done quicker, safer, with less physical effort. Increase labor dollar return. PORTABLE—Carry with one hand. EASY OPERATION—Less hand chain pull. LOW HEADROOM—Highest possible lift. CM-ALLOY flexible welded load chain. Lifetime lubrication. *More CYCLONE Hoists are in use today than any other hoist in their class.*

CYCLONE CATALOG NO. 145
Illustrates, describes and prices all models. Sent on request or ask your CM Distributor.

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONT.

▲ For more details circle NED-87 J9 on enclosed inquiry slip ▲

NEW! UNISORB LEVEL-RITE 200 Machinery Mount



Here's an all-purpose, self-contained leveling mount ideal for light plant equipment and heavier office machines. Provides simple, fast and secure mounting, and precise leveling . . . plus maximum vibration control. Use them on such equipment as . . .

- Duplicating machines
- Business computers and machines
- Laboratory instruments and test equipment
- Small lathes, drill presses, punch presses
- Air conditioning units
- Pumps and compressors

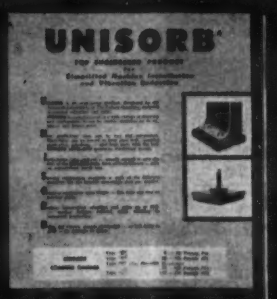
Model LR 200 is precision leveling device, handles loadings up to 200 lbs. per unit.

Try a set, NOW! Send for bulletin and details on Money-Back Trial Offer. Also prices on sets for quantity installation.

UNISORB Division of The FELTERS Company | 224 South St., Boston 11, Massachusetts FE9-13

▲ For more details circle NED-81 J9 on enclosed inquiry slip ▲

NEW BULLETIN on Machinery Mountings



Tells how to save time and money when installing all types of machinery. Describes savings of 30% and more in cost, 80% in time. Shows a "Do-It-Yourself" Leveling Mount, describes Unisorb cement and Unisorb Vibration absorption; and gives more valuable tips.

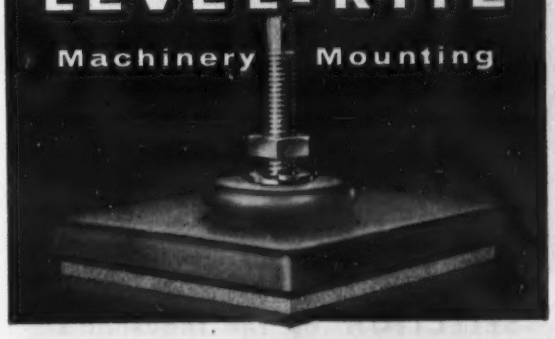
Unisorb pads come in a wide range of densities — a type for every kind of machine. Look for the red center and brand mark.

Send for this New Unisorb Bulletin and details on Money-Back Trial Offer today!

UNISORB Division of The FELTERS Company | 224 South St., Boston 11, Massachusetts FE9-11

▲ For more details circle NED-85 J9 on enclosed inquiry slip ▲

UNISORB LEVEL-RITE Machinery Mounting



New! A universal, self-contained leveling mount for all types of machines. Precise leveling, load ratings up to 7500 lbs. per unit.

- Exclusive screw-post quickly and surely levels machine, compensates for uneven or pitched floors.
- No bolts, lag screws or cement required, machines are always mobile.
- Saves up to 80% in installation time.
- Superior Unisorb vibration dampening reduces up to 85% of transmitted vibration. Less noise, easier to work, less building maintenance.
- Unisorb is long wearing, resilient, impervious to oils and cutting compounds.

Send for new Unisorb Bulletin and price list, today.

UNISORB Division of The FELTERS Company | 224 South St., Boston 11, Massachusetts FE9-9

▲ For more details circle NED-88 J9 on enclosed inquiry slip ▲

Play it Safe in HAZARDOUS AREAS!

GEMCO EXPLOSION-PROOF ENCLOSURES

Protect hazardous areas in your plant *economically* with Gemco explosion-proof pushbutton stations and enclosures. Lightweight cast aluminum construction, Gemco modular construction permits special pushbutton stations containing 1 to 64 units in one enclosure.

Specials? Gemco *standard* enclosures are available with receptacles, viewing windows, *plus* pushbutton stations and control panels.

Design and construction; NEMA types 7 and 9.

Write today for Bulletin No. 659 on Gemco explosion-proof enclosures

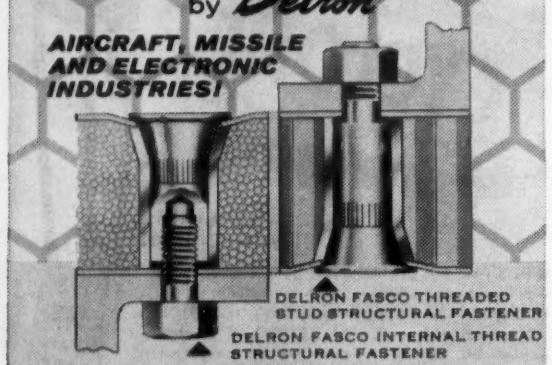
GEMCO ELECTRIC COMPANY
25685 West 8 Mile, Detroit 40, Mich.

For more details circle NED-89 J9 on enclosed inquiry slip

HONEYCOMB and sandwich panel FASCO FASTENERS by Delron

PATENTS PENDING

AIRCRAFT, MISSILE AND ELECTRONIC INDUSTRIES!



Illustrated above are two of the many new Delron structural design fasteners now available for Honeycomb and Sandwich Panels.
• Write for engineering data.

• . . . Largest manufacturer of specialized Sandwich Panel Fasteners.

THE DELRON COMPANY, INC.
5224 Southern Avenue, South Gate, California
LOrain 7-2477

For more details circle NED-90 J9 on enclosed inquiry slip

this is it! 8 PAGES

One and Only Decimal Reamer Catalog!

The world's greatest Reamer
SELECTION by the thousand's
BY STYLES • DIMENSIONS
RANGES • SELECTIBILITY
STOCK ITEMS • NET PRICES

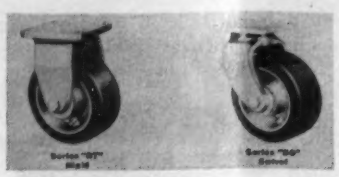
BUY SUPEREAM — The reamer that is sold and stocked in more sizes than any other reamer in the whole world.

TWENTIETH CENTURY MFG. CO., Box 429NED, Libertyville, Illinois
GENTLEMEN: Send us the NEW SELECTIVE CATALOG No. 10A.
NAME _____ Firm _____
Address _____
City _____ Zone _____ State _____

For world's greatest selection of REAMERS!

For more details circle NED-91 J9 on enclosed inquiry slip

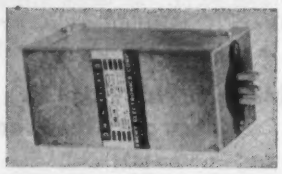
ALUMINUM CASTERS
in 5 and 6-in. swivel, rigid types



Series BS swivel and BT rigid 5 and 6-in. aluminum casters are designed for light duty use in food processing and chemical plants where corrosive conditions prevail. Units have sealed bearings and 2-in. wide neoprene rubber tread wheels. Made by Bassick Co., 3045 Fairfield Ave., Bridgeport 5, Conn.

For more details circle NED-92 J9 on enclosed inquiry slip

MERCURY PLUNGER RELAYS
plug-in unit rated 20 amp at 115 v

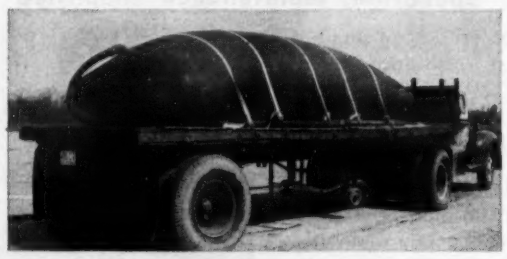


Plug-in MiniRelay series added to expanded line of chassis mount mercury plunger relays speeds installation in power supply, motor control, or other similar circuits. Normally open or closed contacts are available in the single-pole MR-10PL and in combinations of contacts for the two-pole MR-14PL. Former, shown in photo, measures 4 x 2¼ x 2¼ in. and is rated 20 amp at 115 v ac. Actuating coils for most operating voltages are available. Made by Ebert Electronics Corp., 212-32N Jamaica Ave., Queens Village 28, N. Y.

For more details circle NED-93 J9 on enclosed inquiry slip

BULK LIQUID CONTAINER
of fabric, holds 200,000 gallons

Now available in 200,000-gallon size, fabric containers facilitate the storage and handling or transportation of bulk liquids. These collapsible Pillow Tanks are relatively light in weight and can be rolled up like a rug when not in use. They can be overloaded 25 per cent without damage, and virtually any liquid except acids can be stored or transported. They are made of nylon cloth and gasoline resistant synthetic rubber in one or two-ply constructions. The 200,000-gallon tank is 124 ft long, 38 ft wide, and weighs 4000 lb. Tanks were previously made in 1100 to 50,000-gallon capacities. Picture shows smaller size tank on highway trailer. Made by Goodyear Tire & Rubber Co., 1144 E. Market St., Akron 16, Ohio.



For more details circle NED-94 J9 on enclosed inquiry slip

CONTOUR GRIP

Set up any job in seconds
then take deeper cuts, faster feeds

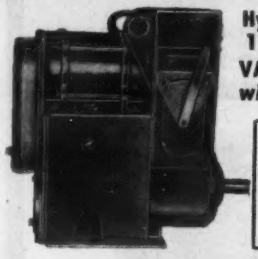
Makes any tool more productive. Here's why:
Contour Grip is a standard fixture that holds any irregularly shaped part so tightly that you can feed faster and take deeper cuts. Use any type tool, eliminate need for costly special-purpose jigs and fixtures. Your operator sets up Contour Grip in seconds, then goes from piece to piece just by backing off the jaws, dropping the next piece in and tightening up. For long runs or short.
The secret of Contour Grip's strength is its individual steel fingers, each of which moves independently as it contacts the work. The fingers mold around the part, and then tighten up **giving greater holding power and a more positive grip than any ordinary fixture can.**
To learn how Contour Grip works and to see the various models available, see your local dealer or contact us direct we'll be glad to send our latest bulletin.

dieco DIE SETS
E. W. BLISS COMPANY
DIE SUPPLY DIVISION
1400 Brookpark Road
Cleveland, Ohio

Available in Canada through John Bertram & Sons, Ltd., Dundas, Ontario.

For more details circle NED-95 J9 on enclosed inquiry slip

SAVE! Brand New Surplus Gov't Cost $3750.00



Hydraulic 1½ H.P. TRANSMISSION
VARIABLE SPEED 0 to 350 RPM
with Instantaneous Reversing

Only $147.50 fob
COMPLETE with MOTOR
220 Volt, 60 Cy., 3 Ph., A. C.

Now own this Heavy Duty Machine at a fraction of its true value!
SATISFACTION GUARANTEED or MONEY BACK!

Incorporates A Powerful 6-to-1 Torque Multiplier
For High Torque Applications Such As:

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- Machine Tool Drives
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- Elevators
- Winches
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1½ horsepower capacity (continuous duty). Complete with totally enclosed motor, 220 volt, 60 cy., 3 ph., AC. Output speed reversible in either direction from 0 to 350 RPM. Forward and reverse speeds can be the same or different. Speed is smooth and constant. Ideal for continuous reversing! Precise effortless speed selection. Neutral off position. Controls easily altered for remote control. Ball and Roller bearing throughout. Manufactured by WESTINGHOUSE and OIL GEAR CORP. to rigid Gov't specifications. Extremely compact and self contained; size 21½" L, 9" W, 20½" H. 200 lbs. Output shaft 1" dia. 2½" long with standard keyway. Shipped complete with full instructions and service manual.

Other motors optional at additional cost. { 220/440 V., 60 Cy., 3 Ph. .....add $37.50; 220 V., 60 Cy., Single Ph. .....add $36.75

SUPPLY LIMITED! ORDER DIRECT FROM THIS AD
Write, wire or phone TAYLOR 9-1365
ROBERTS ELECTRIC COMPANY, Dept. ND-951
849 W. GRAND AVE. CHICAGO 22, ILL.

For more details circle NED-96 J9 on enclosed inquiry slip

MINIATURE ROTARY SWITCH

ESCO Type MA-12 is a miniature rotary switch designed for applications requiring 3 amperes 115 v.a-c rating.

This fungus-inert, corrosion-resistant rotary switch is designed to meet MIL-S-3786.

TYPE MA-12
ACTUAL SIZE

- Sections – up to five sections
- Poles – up to 6 poles per section
- Electrical rating – 3 amp. 115v. a-c continuous; ½ amp. interrupting
- Voltage breakdown – 1000 volts RMS
- Positions – 2 to 12 positions per section

Sections and rotors molded of MA 1-60, per MIL-M-14E. Current carrying parts are made of silver-alloy. Designed for single-hole panel mounting. The shaft is ¼" in diameter.
Write for Bulletin No. 14 for further information.

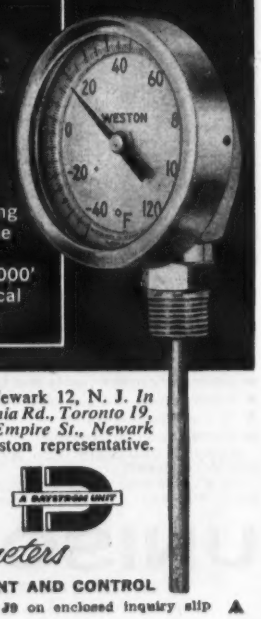
ESCO of WEYMOUTH
ELECTRO SWITCH CORPORATION
167 King Avenue, Weymouth 88, Massachusetts

For more details circle NED-97 J9 on enclosed inquiry slip

NOW FROM WESTON
THE NEW '4000' SERIES
heavy duty bi-metal thermometers

RIGHT
for all installations requiring the ultimate in serviceability, long-term accuracy and ruggedness.

WRITE
for new literature giving complete details on the construction and performance of the '4000' bi-metals. See your local distributor or write to:



Daystrom-Weston Sales Division, Newark 12, N. J. *In Canada: Daystrom Ltd., 840 Caledonia Rd., Toronto 19, Ont. Export: Daystrom Int'l., 100 Empire St., Newark 12, N. J.* Or contact your local Weston representative.

WESTON A DAYSTROM UNIT
Bi-metal Thermometers
WORLD LEADER IN MEASUREMENT AND CONTROL

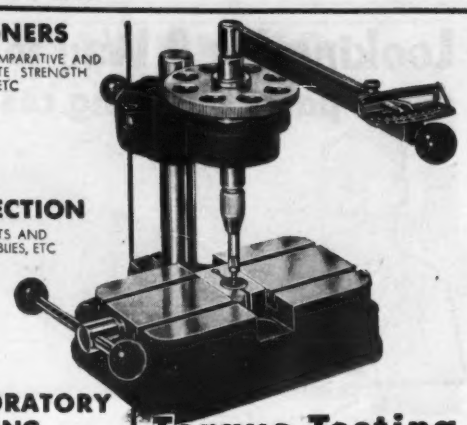
For more details circle NED-98 J9 on enclosed inquiry slip

DESIGNERS
for COMPARATIVE AND ULTIMATE STRENGTH TESTS, ETC

INSPECTION
of PARTS AND ASSEMBLIES, ETC

LABORATORY TESTING
of SCREWS
SOCKETS
TAPS
LOCK NUTS
DRIVING BITS
HAIR SPRINGS, ETC.

PRODUCTION QUALITY CONTROL
for DELICATE OPERATIONS, ASSEMBLY OF FRAGILE MECHANISMS OR INSTRUMENTS, FOR FASTENERS IN PLASTICS AND LIGHT METALS.



Torque Testing FIXTURE

A universal fixture with 1000 uses. Holds driver in accurate alignment; in instrument bearings. Provides rapid engagement with test sample...torque is applied and measured with Sturtevant Torque Wrench.

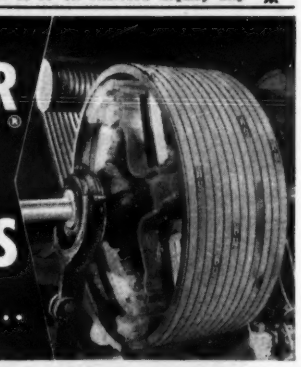
Model TTF¼ Capacity 0-200 in. lbs.
Model TTF½ Capacity 0-150 ft. lbs.

Write for Bulletin TF

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

▲ For more details circle NED-99 J9 on enclosed inquiry slip ▲

ALLIGATOR® V-BELT FASTENERS
make this possible . . .



Now you can keep costly "downtime" at a minimum (no need to dismantle machinery) . . . make up special size V-Belts quickly . . . simplify the replacement of worn or damaged V-belts.

Remember: Open-end V-Belting assures you of . . .
- ✔ **Far less stretch than other "connected-type" belting**
- ✔ **Top drive performance — greater traction surface between drive belt and sheave.**

And! . . . Alligator V-Belt Fasteners provide one strong joint . . . terrific holding power!

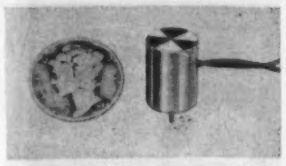
FOUR TYPES . . .
- **Regular Alligator V-Belt Fasteners for B, C, D, E and BB V-Belting.**
- **Aluminum • Monel**
- **Permanently Assembled Fasteners.**

ORDER FROM YOUR DISTRIBUTOR OR WRITE TO . . .

Flexible STEEL LACING COMPANY
4664 LEXINGTON ST. • CHICAGO 44, ILLINOIS

▲ For more details circle NED-100 J9 on enclosed inquiry slip ▲

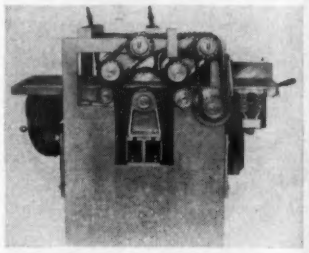
ON-OFF INDICATOR is miniature visual type unit



Available with either a pointer or an enclosed hermetically - sealed shutter arrangement, this on-off indicator is small, light in weight, and resistant to shock and 350° F temperatures and environments. This coil and armature type unit operates on any voltage to 120 v dc or frequencies up to 2500 cycles without rectification. It is easily mounted. Made by **Leetronics, Inc.**, 30 Main St., Brooklyn 1, N. Y.

▲ For more details circle NED-102 J9 on enclosed inquiry slip ▲

HEAVY-DUTY RIP SAW rips ¼ to 2½ in. thick materials



This No. 444 heavy-duty rip saw will rip materials varying from ¼ to 2½ in. thick, including bundled veneers, through the full range without resetting the four driven rolls. Large top rolls facilitate feeding of materials as short as 13 in. Feed mechanism is actuated by separate motor drive. Vertically adjusted arbor affords easy changing of saws. Made by **Mereen-Johnson Machine Co.**, 4401 Lyndale Ave. N., Minneapolis, Minn.

▲ For more details circle NED-103 J9 on enclosed inquiry slip ▲

PLASTIC-DRAWER CABINETS simplify small parts storage

Accessible, low-cost storage of many different small parts, components, and assemblies is afforded by M3 and M4 plastic-drawer cabinets. One-piece drawers measure 11 in. deep, 2 in. high, and 3 in. wide for Model M3 and 4 in. wide for Model M4. They are molded of durable, clear plastic with front pull handle. Stop tab at rear limits travel and prevents spillage of contents. Self-adhesive drawer-front labels and inside label slots are provided. Each drawer can be divided into 2 to 12 compartments with adjustable dividers. Welded steel cabinets are available in sizes to hold from 6 to 60 plastic drawers. Prices range upward from $8.98. Made by **Akro-Mils, Inc.**, 820 E. Market St., Akron 9, Ohio.

▲ For more details circle NED-104 J9 on enclosed inquiry slip ▲

SEE THE COMPLETE LINE!

HILD
TRANSFERABLE HEAD
VACUUM CLEANERS

FOR USE ON YOUR OWN 55 GALLON DRUM

WRITE FOR INFORMATION
HILD FLOOR MACHINE CO. INC. NED-69
1217 W. Washington Blvd., Chicago 7

Manufacturers of
Floor Machines and Industrial Vacuum Cleaners Since 1927

▲ For more details circle NED-105 J9 on enclosed inquiry slip ▲

End processing problems caused by air-borne dust, abrasives, soot, smoke with the

HONEYWELL ELECTRONIC AIR CLEANER

These costly microscopic spoilers never get a chance to ruin the work when Honeywell's Electronic Air Cleaner is on the job. It electronically traps particles 100 times as small as those stopped by mechanical filters. Over-all efficiency is 6 times that of mechanical filters as measured by standard dust spot techniques.

PAYS FOR ITSELF! Send coupon today to learn how the ELECTRONIC AIR CLEANER saves you money in:

- film and data processing
- lens grinding
- furniture finishing
- electronic tube manufacturing
- controlled environment rooms for precision manufacturing, processing and assembly
- switch and relay rooms
- broadcast transmitters
- many other applications

MINNEAPOLIS-HONEYWELL,
Dept. NW-9-36, Minneapolis 8, Minnesota
Please send free copy of Electronic Air Cleaner booklet, "A Close Look At Air-Borne Dirt."
We have the following problems:

Name _____
Company _____
Address _____
City _____ *Zone* ____ *State* ____

▲ For more details circle NED-106 J9 on enclosed inquiry slip ▲

new roofing material... TROPIGLAS

New development cuts roof repair cost to little more than material cost!

Tropiglas is the biggest roofing advance in 50 years! Ageless glass fibres make it tough, flexible, durable, light weight—it imposes no excess load on roof. Lies flat instantly—no waiting. Applied by unskilled labor, Tropiglas *embeds* in Tropical Cold Process Roofkoter, forms a tight, one-layer surface that can't blister, rot or wrinkle. Use it for all roof repair and reconditioning, for a fast, low-cost, longer-lasting job.

FREE! **Write for complete information on how TROPIGLAS does a better roof reconditioning job at lower cost.**

OUR 76th YEAR

Heavy-Duty Maintenance Paints Since 1883
TROPICAL PAINT COMPANY • 1124-1250 W. 70th, Cleveland 2, Ohio
PARKER RUST PROOF PRODUCTS

▲ For more details circle NED-101 J9 on enclosed inquiry slip ▲

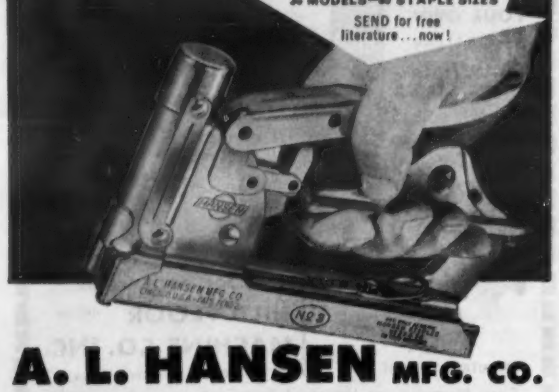
DON'T FLIP-JUST ZIP!

Tired of using clumsy, jam-up, slow-working tackers? Then it's time you switched to rugged, fast, always-dependable Hansen Tackers . . . the lightweight models with heavy duty performance. Remember the name . . . Hansen!

HANSEN AUTOMATIC **TACKERS**

36 MODELS—80 STAPLE SIZES

SEND for free literature . . . now!



A. L. HANSEN MFG. CO.

5024 Ravenswood Avenue • Chicago 40, Illinois

▲ For more details circle NED-107 J9 on enclosed inquiry slip ▲

Lowering a partly assembled trailer top from an upright jig. Five hoists are used because some tops are made in 3 sections. This is a 44-ft. Monorail crane. A 30-ft. crane and 150 ft. of Monorail track also speed production.

AMERICAN MONORAIL DOES IT!

20% Boost in Production

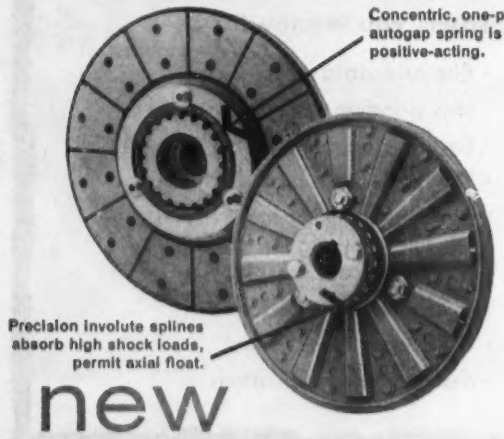
20% Saving in Labor

"Our Monorail system eliminated 16 hard laboring jobs—4 in each of 4 departments. Our production has increased at least 20%, thanks to Monorail and we have virtually eliminated backsprains and accidents."

(Statement made by an executive of Richardson Homes Corporation, mobile home builder at Elkhart, Indiana.)

AMERICAN MONORAIL 1116 E. 200th STREET CLEVELAND 17, OHIO

▲ For more details circle NED-108 J9 on enclosed inquiry slip ▲



new

SPLINE-DRIVE armature

for Warner electric brakes and clutches

Here's how to slash maintenance downtime, prolong armature life, and increase product values on high-cycle machinery. Warner's new mounting distributes the load evenly on multiple splines. Fast alignment and easy assembly reduce total cost. Patented one-piece autogap spring gives efficient snap-action release. Wear take-up is automatic. Four sizes: 825 through 1525. Write for Bulletin No. P-68.

WARNER **Warner Electric Brake & Clutch Co.** Beloit, Wisconsin

▲ For more details circle NED-109 J9 on enclosed inquiry slip ▲

METRIC CIRCLE TEMPLATE

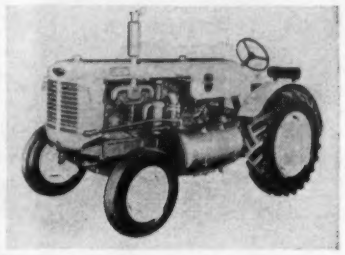
diameters range from 2 to 30 mm

This No. 240 metric circle template contains 37 circles from 2 to 30 mm in diameter. Circles from 2 to 10 mm are in 0.5 mm increments, whereas 11 to 30-mm circles are in increments of 1 mm. Templates are made of 0.030-in. matte finish plastic, and circles are milled with allowance for pencil point. It measures 7 x 4 in. and sells for $1. Made by **Rapidesign, Inc.**, Box 429, Burbank, Calif.

▲ For more details circle NED-110 J9 on enclosed inquiry slip ▲

TRACTOR-AIR COMPRESSOR

travels at 15 mph, delivers 100 psi

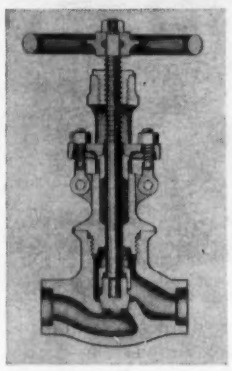


Self-propelled Le Roi 125 Tractair, a combination tractor and air compressor, provides 125 cfm of free air compressed to 100 psi. Its single-stage, piston type compressor is integral with the 42-hp engine. Unit travels to the job at 15 mph, can move over rough terrain, or work on a 2 to 1 slope. All gages are grouped on one panel. With only one crankcase, one lubrication system serves both engine and compressor. Available attachments include front end loader, back hoe, backfill blade, snow plow blade, Mobildrill, and Trac-Jac. Made by **Westinghouse Air Brake Co.**, Le Roi Div., Milwaukee 1, Wis.

▲ For more details circle NED-111 J9 on enclosed inquiry slip ▲

LIP-SEAL BONNET VALVES

modified to eliminate stem binding



Expanded line of lip-seal bonnet valves covers three distinct pressure-temperature classifications, rather than the two groups previously produced. Cast carbon steel Series 3800 for 1500 psi and 850° F is offered in globe, angle, and lift-check types. The 1570-psi Series 3900 in the same types is made in cast chrome moly steel for temperatures to 1050° F. Globe and angle Series 4000 valves rated 2520 psi at 1050° F are also made in Crane No. 7 cast chrome moly steel. Sizes range from ½ through 2 in. Modification includes a centering shoulder to eliminate possibility of stem binding. Metal thicknesses meet ASA and ASME codes. Made by Crane Co., 836 S. Michigan Ave., Chicago 5, Ill.

▲ For more details circle NED-112 J9 on enclosed inquiry slip ▲

- Removing chips, shavings, filings, and airborne debris that clog machinery, distort tolerances, mar product finishes.
- Controlling mists and fogs in wet machining operations.
- Recovering valuable dusts, coolants, heated air.
- Protecting machinery investments with preventive maintenance.

FREE . . . latest specs and data on TORIT Dust Collectors for handling these and other air pollution problems. TORIT: the high efficiency line with savings up to 1/2!

- Reducing absenteeism with improved health and safety precautions.

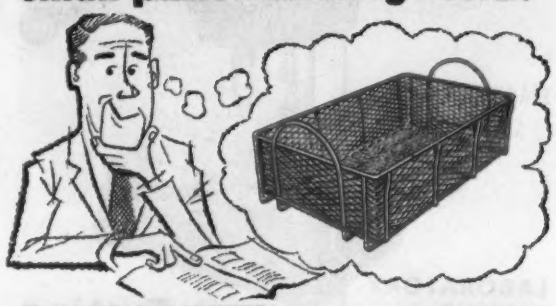
WRITE TODAY:

TORIT MANUFACTURING CO.

1133 Rankin St., St. Paul 16, Minnesota, Dept. 214

▲ For more details circle NED-113 J9 on enclosed inquiry slip ▲

Looking For A Way to cut small parts handling costs?



EEZY-STAK BASKETS **STOP EXTRA HANDLING, SPEED PARTS PROCESSING . . . REDUCE COSTS!**

Here's how one manufacturer solved costly, time-consuming, small parts handling. Using EEZY-STAK standard wire baskets, a complete series of parts transfer operations was eliminated. Result: Five production processes now performed in one basket—degreasing, drying, pickling, rinsing, cyaniding—plus storage, *without parts removal!*

EEZY-STAK baskets have the exclusive, patented *interlock* handle, for easy stacking and compact storage. Open mesh construction Full visibility . . . quick drainage . . . clean! From initial production to final assembly, EEZY-STAK baskets put small parts handling on an economical, low-cost basis. Cut Costs! Investigate the advantages of EEZY-STAK baskets for *your* plant!

Write today for Bulletin No. B-54 to Wire & Iron Products Inc., 1724 Sixteenth Street, Detroit 16, Michigan.

WIPCO

▲ For more details circle NED-114 J9 on enclosed inquiry slip ▲

FREE CABINETS!

Included at no extra cost with each complete or sectional order of the new DUNDICK DeLuxe Precision Pins

THE PIN WITH A MILLION USES

- Core Pins
- Perforators
- Gages
- Set-up Pins
- 2" Long

$1.25 per pin in lots of 10 or more in your choice of sizes.

721 sizes—from .030 to .750

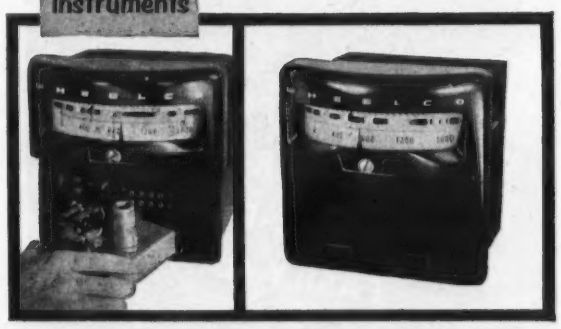
GUARANTEED ACCURACY within a tolerance of plus or minus fifty millionths

- Each cabinet complete with lacquered hardwood block. Contains properly identified and sized holes to hold pins.
- Heavy-duty all-steel construction.
- Cabinets interlock to form compact unit.

DUNDICK TOOL WORKS, INC. 3410 West 31st St. Chicago 23, Illinois

▲ For more details circle NED-115 J9 on enclosed inquiry slip ▲

Complete control versatility offered by Series 400 Capacitrols



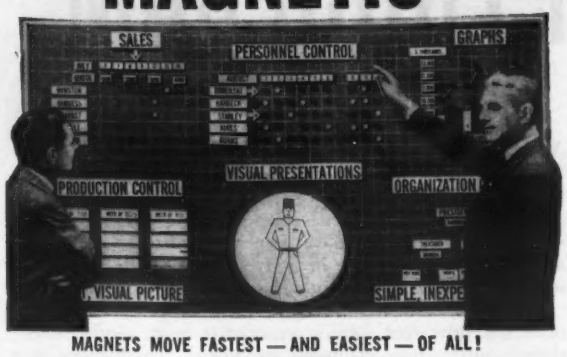
Just "plug in" the right chassis into the Wheelco 400 Series Capacitrol to get any of these six control forms: Two-position (on-off), time-proportioning, multi-position, two-position (heavy-duty), simplified form proportioning, or electric proportioning "stepless" control. You get rugged dependability and easy maintenance, too! Get details by writing for Bulletin F6314-3.

BARBER-COLMAN COMPANY

Dept. U, 1514 Rock Street, Rockford, Illinois

▲ For more details circle NED-116 J9 on enclosed inquiry slip ▲

VISUAL **MAGNETIC** CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

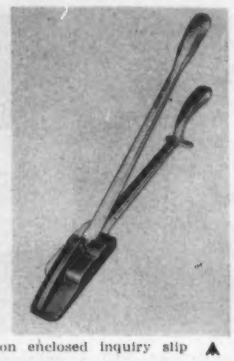
PRICE LIST & BROCHURE NE9 FREE ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS

Methods Research Corp.
442 Mosel Avenue, Staten Island 4, New York

▲ For more details circle NED-117 J9 on enclosed inquiry slip ▲

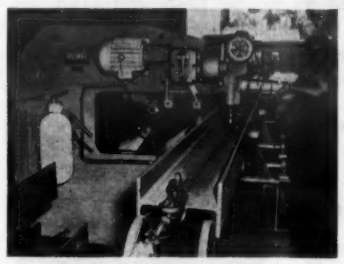
STEEL STRAPPING CUTTER cuts up to 2 x 0.050 in. strap



Operator fatigue is minimized with use of Model 550 Bulkbinder heavy-duty flat steel strapping cutter. It cuts strap up to 2 in. wide by 0.050 in. thick. Tool has I-beam handles for strength and a jaw angle designed for minimum human effort. It slips under strapping easily on all types of packages. Made by **A. J. Gerrard & Co.**, 1950 Hawthorne Ave., Melrose Park, Ill.

▲ For more details circle NED-120 J9 on enclosed inquiry slip ▲

BEAM SPLITTING MACHINE cuts at 10 to 20 fpm



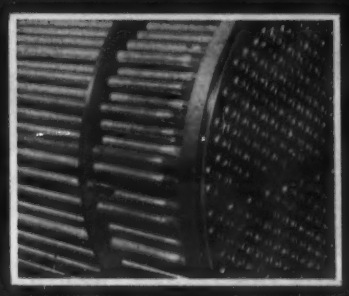
I-beams can be pulled through this Pullmax U-10 beam splitting machine at the rate of 10 to 20 fpm. The heavy-duty machine has an automatic mechanism operated by pushbutton control for starting, penetrating, and cutting of heavy metals. It leaves a smooth, finished edge without distortion of the I-beam. Circle cutting, straight shearing, and other standard Pullmax cutting and forming operations can also be performed on the machine. Made by **American Pullmax Co.**, 2455 N. Sheffield Ave., Chicago 14, Ill.

▲ For more details circle NED-121 J9 on enclosed inquiry slip ▲

IN-PLANT ELECTRIC TRUCK carries long loads and personnel

Automotive type controls on the Station Wagon electric powered in-plant truck include wheel steer, foot-operated brakes, and foot pedal speed control with four speeds forward and reverse. Equipped with four leather covered seats, it can transport personnel and visitors. Seats are quickly removed for handling long loads, packages, maintenance equipment, and parts. With a suitable coupler, it becomes a towing tractor. Either a 12 or 24-v battery provides speeds up to 10 mph. Standard model is 36 in. wide and 62 in. long. Capacity is 2000 lb. Larger models can be produced. Made by **Moto-Truc Co.**, 1953 E. 59th St., Cleveland 3, Ohio.

▲ For more details circle NED-122 J9 on enclosed inquiry slip ▲

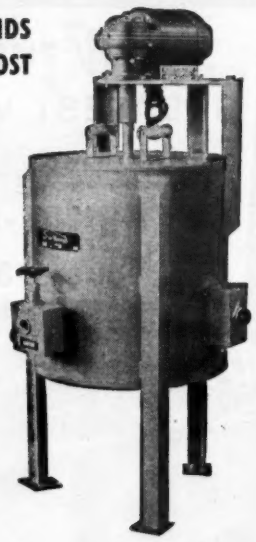


Transferring Heat?

See Page 97

▲ For more details circle NED-124 J9 on enclosed inquiry slip ▲

MELT COMPOUNDS AT LOW COST



This Sta-Warm compound melter, model Y, with selective temperature control, heated gate valve and power driven agitator makes simple work of melting a wide variety of industrial compounds *economically, uniformly, dependably.*

Capacities from 5 to 2000 gal. Voltages to 550-v. Widely used and preferred because of its high efficiency in heating critical materials without burning and also without leaving cold unheated lumps to clog outlet.

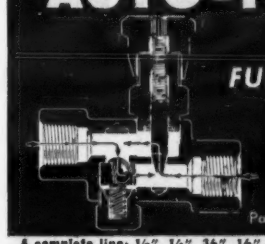
Ask for complete catalog literature today on this and on other Sta-Warm melting equipment. No obligation.

"If You Can Wrap a String Around It, Sta-Warm Can Heat It for You."

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

▲ For more details circle NED-118 J9 on enclosed inquiry slip ▲

AUTO-PONENT®
HYDRAULIC
FULL FLOW VALVES
Flow Control, Needle, Check, for HYDRAULIC Power



Model FF Flow Control Valve with Dial and Knob adjustment for direct reading and duplicating reference. Now available in Aluminum for 3000 p.s.i.
Pat #2,841,174

A complete line: 1/8", 1/4", 3/8", 1/2", and 3/4" female Bryseal Pipe Sizes in all models and types. Equivalent Aeronautical Tube Sizes on special order.

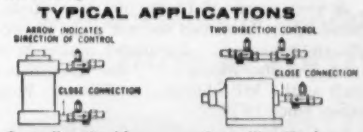
MINIMUM PRESSURE DROP AND POWER LOSS . . . Oversize ports and passages give maximum flow at minimum pressure drop, insure greater accuracy and response in hydraulic or large volume air cylinder control.

EASY FLOW ADJUSTMENTS under full pressure. Seal located at port to eliminate air or dirt traps. Gland structure equally effective on pressure or vacuum.

SENSITIVE, CHATTERLESS BALL CHECK . . . Patented design insures rapid ball movement to open or close at low differentials.

FORGED BODIES permit higher pressures with wide safety margins. Aluminum—3000 psi; Steel and Stainless Steel—5,000 psi. Pressure ratings based on better than 5 to 1 safety factor. All internal parts are Stainless. Write for illustrated catalog.

TYPICAL APPLICATIONS

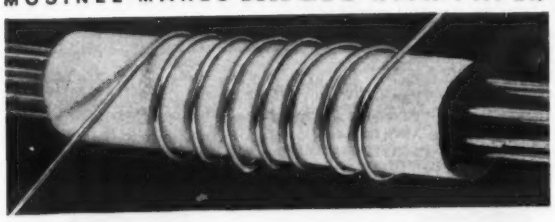


Controlling Double Acting Cylinder — Controlling Single Acting Cylinder

AUTO-PONENTS INC. 2929 GRANT STREET BELLWOOD, ILLINOIS (Chicago Suburb)

▲ For more details circle NED-125 J9 on enclosed inquiry slip ▲

MOSINEE MAKES **MAGIC** WITH PAPER



MOSINEE Dielectric (Electrical Insulating) Papers for maximum protection

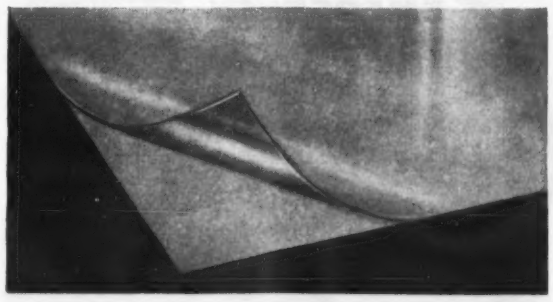
- Controlled dielectric strength
- Low ash and chloride content
- Low aqueous conductivity rating
- Chemically inert
- Meets requirements of ASTM-D-1305
- Uniform quality—from roll to roll . . . carload to carload
- Paper made to solve your specific problem
- Wide application—on single- and multiple-conductor cables, wire, motors, transformers, appliances, equipment, etc.

FREE **DATA FILE**

Write Dept. NED-9.
MOSINEE
PAPER MILLS COMPANY
Mosinee, Wisconsin

▲ For more details circle NED-119 J9 on enclosed inquiry slip ▲

MOSINEE MAKES **MAGIC** WITH PAPER



Laminating and coating papers

- Developed to your requirements for performance under conditions of moisture, mold, fire, low temperatures, etc.
- Ideal for laminating with foil, glassines, films, etc. . . . for coating with waxes, plastics, resins, organosols, plastisols.
- Uniformly hard, sound rolls without soft spots or corrugations. Free from shives, other imperfections.
- Basis weight and caliper across the sheet plus other specific characteristics will be uniform from roll to roll . . . from carload to carload.

FREE **DATA FILE**

Write Dept. NED-9.
MOSINEE
PAPER MILLS COMPANY
Mosinee, Wisconsin

▲ For more details circle NED-123 J9 on enclosed inquiry slip ▲

MOSINEE MAKES **MAGIC** WITH PAPER

Twisting papers—custom-made to your needs

- Bleached or unbleached . . . natural or in a variety of colors . . . creped or flat tissue . . . with special characteristics such as controlled wet strength and mold-proof, flame-resistant qualities, etc.
- High tensile strength and tear resistance. Carefully controlled caliper and apparent density. Free from shives and other imperfections.
- Made for products such as twine, seat covers, open-mesh bags, welting cord, electric wire coverings, rug yarns, etc.
- Basis weight, caliper and physical strength are uniform from roll to roll . . . from carload to carload.

FREE **DATA FILE**

Write Dept. NED-9.
MOSINEE
PAPER MILLS COMPANY
Mosinee, Wisconsin

▲ For more details circle NED-126 J9 on enclosed inquiry slip ▲

Permanently End Thread Failure That Costs You Needless

• downtime • production loss • labor costs

Worn, stripped threads? Here's all you do:

1. drill out the old threads
2. tap with Heli-Coil* tap provided in SHOP-PACK
3. wind in a Heli-Coil precision formed, stainless steel Screw-Thread Insert.

Result—Back-to-original-size threads that permanently resist wear, corrosion, galling and stripping.

Heli-Coil Screw-Thread Inserts are available in all standard thread sizes in the economical SHOP-PACK Thread Repair Kit containing a large supply of inserts and all necessary installation tools. Write today for folder and name of your nearest Heli-Coil distributor. *Reg. U.S. Pat. Off.

HELI-COIL CORPORATION
3409 Shelter Rock Lane, Danbury, Conn.

In Canada: W. R. WATKINS CO., Ltd., 41 Kipling Ave., S. Toronto 18, Ont.

▲ For more details circle NED-127 J9 on enclosed inquiry slip ▲

WATER

DISTILLED, DEMINERALIZED,

or 18,000,000 OHM PURITY?

BARNSTEAD EQUIPMENT

produces it in laboratory quantities or on a

GIANT SCALE

Whatever your pure water requirement, distilled, demineralized, or even water of 18,000,000 ohm purity, you can depend upon Barnstead for the right answer . . . the right equipment . . . Barnstead makes both . . . Stills and Demineralizers . . . and specialized equipment such as the MF® Submicron Filter . . Pure Water Specialists since 1878.

Write for Catalog "G" and Catalog 127.

Barnstead STILL & STERILIZER CO.
16 Lanesville Terrace, Boston 31, Mass.

▲ For more details circle NED-128 J9 on enclosed inquiry slip ▲

FREE MARKAL PAINTSTIK!

We will send you without cost or obligation a MARKAL PAINTSTIK. They are available in various types suitable for marking on any kind of material. Hot surfaces up to 2100°F, also welding and heat treating. Cold surfaces down to —50°F, wet, dry, icy, oily, rough, smooth, acid or alkali. *MARKS Are Permanent, Fadeproof, Weatherproof.* Specify surface condition, material, temperature at time of marking.

Cold . . . down to —50°F. Hot . . . up to 2100°F.

USE THIS COUPON OR WRITE ON YOUR LETTERHEAD!

Here's what I want to mark: _____

_____

_____

_____

Marking Temperature _____ Max. Temp. _____ °F.

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

My Distributor's Name _____

MARKAL COMPANY
3053 West Carroll Avenue • Chicago 12, Illinois

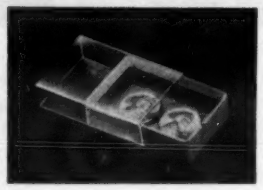
▲ For more details circle NED-129 J9 on enclosed inquiry slip ▲

STEAM-JET CLEANER delivers 100 gph at 150 psi

Enclosed, compact, wheel-mounted Speedysteam 100 steam-jet cleaner which can be operated on kerosine or No. 1 or 2 fuel oil makes fast work of plant and equipment clean-up jobs. Start-up time is only 90 sec. Unit delivers 100 gph without pulsation and vibration at pressures adjustable from 50 to 150 psi. One filling of the 5-lb dry capacity soap tank is good for 6 to 7 hr. Cleaner is equipped with a ½-hp direct-drive motor, 20 ft of wire-braided ½-in. steam hose, and racks for hose and cord. A water float tank with antisiphon valve assures even, full flow to pump and avoids contamination of tap supply. Made by **Pantex Mfg. Corp.**, Steam Generator Div., Pawtucket 4, R. I.

▲ For more details circle NED-130 J9 on enclosed inquiry slip ▲

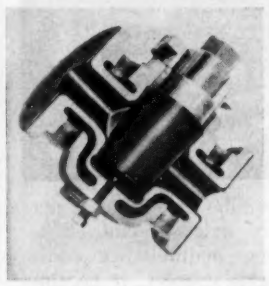
CUSTOM PARTS BOXES have clear acetate sleeve



Seamless, extruded acetate sleeve of these Push-Pak small parts boxes provides strength and rigidity as well as see-through feature. Boxes are custom made to any size or shape. Heavy cardboard tray can be printed to requirements. Separate transparent sleeves are also available to convert customer's present parts boxes. Made by **National Plasticrafters, Inc.**, Dept. 204, 1822 Martin Ave., Sheboygan, Wis.

▲ For more details circle NED-131 J9 on enclosed inquiry slip ▲

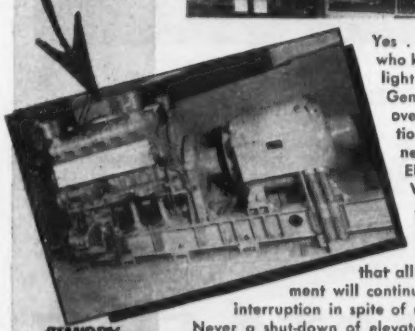
LINED VALVES & FITTINGS resist acids and gases to 375° F



Parks-Cramer standard semisteel and steel jacketed pipe, valves, and fittings in all sizes and types can be furnished lined with Kel-F Haloflurocarbon resin. Lining resists almost all acids, oxidants, alkalies, and gases. It will not contaminate or discolor the product, and resists adhesion of glues, resins, waxes, inks, paints, grease, rubber, and other products. Service range is from −300 to 375° F. Made by **Parks-Cramer Co.**, Fitchburg, Mass.

▲ For more details circle NED-132 J9 on enclosed inquiry slip ▲

Katolight EMERGENCY GENERATOR *Selected by men who know* **POWER!**



Yes . . . Selected by men who know power, this Katolight 300 KW Standby Generator stands guard over electrical operations of the beautiful, new, 21 story B.C. ELECTRIC BUILDING in Vancouver B. C.

This Katolight Standby Unit provides sound assurance that all vital electrical equipment will continue to operate without interruption in spite of normal power failure. Never a shut-down of elevators, heating, refrigeration, communications, lights and other electrical equipment when power blackouts strike.

STANDBY CONTINUOUS PORTABLE POWER PLANTS

KATOLIGHT STANDBY PLANTS IN SIZES UP TO 125 KW . . . UP TO 1,000 KW ON REQUEST

Katolight CORPORATION
Box 891-76 Mankato, Minnesota

WRITE TODAY FOR FOLDER! IT'S NEW!

▲ For more details circle NED-133 J9 on enclosed inquiry slip ▲

PYROCERAM*

Progress Report 3

You can now get the third of a series of reports on a family of crystalline ceramics developed by Corning under the trademark PYROCERAM.

The report includes a description of the general family—some 3,000 formulae have been experimentally melted—and the processes used in converting a glassy material into a PYROCERAM with the aid of nucleating agents.

More particular data are given on the two PYROCERAM materials now sold on a commercial basis. Code 9606 shows outstanding electrical properties, particularly at microwave frequencies and at temperatures up to 1300° F. Code 9608 is a general-purpose PYROCERAM with exceptional mechanical strength and thermal shock resistance and a coefficient of expansion ranging from 3.9 to 11 x 10^{-7}/°F.

For a copy of the report, just write to Dept. 56, Corning, N.Y.

*A trademark of Corning Glass Works

CORNING GLASS WORKS
CORNING MEANS RESEARCH IN GLASS

▲ For more details circle NED-134 J9 on enclosed inquiry slip ▲

NOW **THE WORLD'S GREATEST VALUE IN A COPYING LATHE. THE CLEARING-HARRISON**

Just $3750.00*

* 11" Copying model—$3,750.00†
Standard 11" model—$1,950.00

†Base Price, F.O.B. Chicago, Los Angeles, New York.

Here are copying lathes at prices you would normally expect to pay for a standard machine! Yet the Clearing-Harrison is a world beater of a lathe—carefully designed and as rugged as they come.

Check These Features!

Standard Duty—Copying mechanism doesn't interfere with the use of the lathe for standard operations

Induction Hardened Bed Ways—Ways are hardened and ground by Delapena equipment—virtually exclusive with the Clearing-Harrison

Precision Hobbed and hardened gears

Anti-Friction Bearings to the Spindle

Gap Type Bed—Removable block in bed greatly increases maximum swing

FIND OUT MORE ABOUT THE COPYING LATHE YOU CAN OWN FOR WHAT YOU'D EXPECT TO PAY FOR A STANDARD MACHINE. WRITE CLEARING TODAY!

13" Copying model—$4,850.00†

13" Standard model—$2,950.00†

16" Copying model—$6,950.00†

16" Standard model—$4,450.00†

Coast to Coast Service Facilities

Clearing's nationwide facilities assure you of prompt service always. Replacement parts and accessories are stocked at Clearing and are available through all three plants, at all service centers and through all Clearing dealers.

Clearing, division of U. S. Industries, Inc. also manufactures the Clearing-Axelson line of engine lathes, power presses of all types, dies and special tooling and special equipment for the aircraft and missiles industry.

Write for Clearing-Harrison catalog.

usi Clearing Division of U. S. Industries, Inc.
6499 W. 65th Street • Chicago 38, Illinois

Plants in: Chicago, Ill. • Hamilton, Ohio • Los Angeles, Calif.

▲ For more details circle NED-135 J9 on enclosed inquiry slip ▲

FOR QUICK FOOLPROOF FLUID LINE CONNECTIONS

Here's the coupling for the job

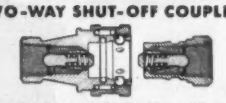
To connect a Hansen Two-Way Shut-Off Coupling, you merely pull back the sleeve on the Socket and push in the Plug. To disconnect, just pull back the sleeve. Available in brass or steel with female pipe thread connections from 1/8" to 1" inclusive.

Write for the Hansen Catalog

Here is an always ready reference when you want information on couplings in a hurry. Lists complete range of sizes and types of Hansen One-Way Shut-Off, Two-Way Shut-Off, and Straight-Through Couplings.

HANSEN SERIES HK®

TWO-WAY SHUT-OFF COUPLING



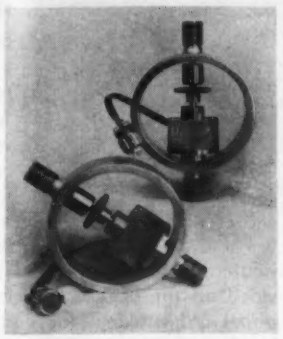
Instantly shuts off both sides of line . . . prevents loss of liquid, gas or pressure.

Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

▲ For more details circle NED-136 J9 on enclosed inquiry slip ▲

FORCE RING TRANSDUCER
measures load by ring deflection



Highly accurate force ring transducer will measure tension or compression loads, torque, material strength, vibratory loads, pressure, and flow. It also finds use in tank or batch weighing and in crane scale applications. Ring picks up magnitude of load and translates it into ring deflection which is measured by the displacement transducer and converted to electrical output for indication or recording. Made by **Morehouse Machine Co.**, 1742 Sixth Ave., York, Pa.

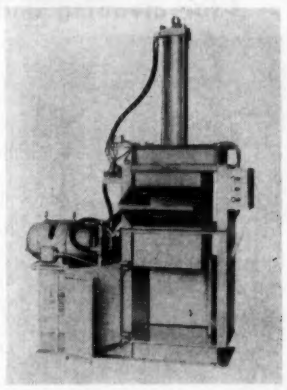
▲ For more details circle NED-139 J9 on enclosed inquiry slip ▲

TOOL GRIPS
nitrile rubber type resist oils

Tough, durable grips for various types of hand tools are molded from Goodrich Hycar nitrile rubber which resists the attack of oil, grease, and chemicals. Grips make the tools easy and safe to use by presenting a good gripping surface. They also resist abrasion. Made by **Fawick Flexi-Grip Co.**, Copley Street, Akron, Ohio.

▲ For more details circle NED-140 J9 on enclosed inquiry slip ▲

BULK MATERIAL PACKER
compacts material 5 to 1



Sawdust, wood shavings, magnesium and aluminum turnings and chips, pulp, and other bulk materials are compacted and packaged into cartons by the Carton packer. Carton is held in a heavy steel container during pressing operation. Operator fills feeder-hopper with material, then pushes start button. Ram moves down hydraulically, compacting the material by as much as 5 to 1. Material remains compressed long enough for operator to remove the carton, close the lids and tape the lid openings. Press is protected by limit switches, and all moving parts are encased. Powered by a 10-hp motor, press stands 8 ft 9 in. high and packs a standard 20 x 20 x 20-in. carton. Made by **Lake Engineering Co.**, 312 Gostlin St., Hammond, Ind.

▲ For more details circle NED-141 J9 on enclosed inquiry slip ▲

"Sounds for Safety"

save your voice with the Falcon Chief and save money, too!

speak as you normally would—be clearly heard and understood up to ½-mile away!

Unique transistorized power megaphone—an instrument you will be proud to own. Gives up to 6,000 two-second amplified messages from standard replaceable battery. Light (3¼ lbs.)—easy to handle and use. Attractive red and gray polyethylene—built for abuse. Attractively priced for you, too!

WRITE for particulars — and free, informative "Sounds for Safety" folder! Dept. ND

Falcon® ALARM CO., INC.
SUMMIT, NEW JERSEY

▲ For more details circle NED-137 J9 on enclosed inquiry slip ▲

GRIPPER® woven wire SLINGS

here's SAFETY for any lifting job

No weak links to break . . . no thin strands to snap . . . no soft core to rot . . . nothing to tear suddenly and drop the load. That's the safety story of Gripper Slings. Spiral wire construction also gives the Gripper Sling complete flexibility to hold any sized load in a firm, yet gentle, grip. And, Gripper Sling's smooth, broad bearing surface won't cut or score stock . . . practically eliminates load damage.

Gripper Slings, pretested to meet load specifications are available in standard lengths and widths with capacities up to 100,000 lbs. Special sizes, alloys or Neoprene or PVC covered slings available. Write for FREE CATALOG and name of your nearest materials handling distributor.

The Cambridge Wire Cloth Co.
Department C • Cambridge 9, Md.

▲ For more details circle NED-138 J9 on enclosed inquiry slip ▲

THE HAMILTON TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO

▲ For more details circle NED-142 J9 on enclosed inquiry slip ▲

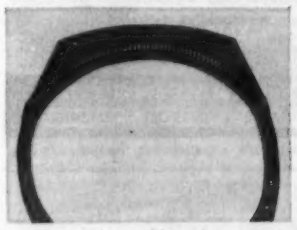
News from your B.F.Goodrich

TW TIRE AND WHEEL ANALYSIS MAN...

B.F.Goodrich All-Purpose tires speed operations for American Airlines

First to reach an American Airlines plane after landing—and last to leave before take-off—is the tractor generator (above). It supplies power while the engines are stopped. Speeding the whole operation are B.F.Goodrich All-Purpose pneumatic tires. The new All-Purpose tread grips on all hauling surfaces, indoors and outdoors. Because it's pneumatic, the All-Purpose cushions the ride, protects load and floors, equipment and driver. If these are advantages you need and want in an industrial tire, the new All-Purpose may be your answer.

New pneumatic is "wired" for puncture protection



Here's money-saving news from B.F.Goodrich for every industrial tire user plagued with puncture problems. B.F.Goodrich pneumatic tires now come "wired" for puncture protection. Under the tread is a shield of steel wire mesh that protects the tire body. Abrasive scrap materials are no longer the problem they once were. No more premature tire failures—no more costly delays. You may need B.F.Goodrich "wired" pneumatics in your work. To find out, mail the coupon below.

"I can save you up to 50% on industrial tire costs"

All-Purpose and "wired" tires are just 2 examples of the specialized industrial tires B.F.Goodrich makes. As your trained Tire and Wheel Analysis man, I know which tires are best for you. My survey of your operations costs nothing—can pay big dividends in money saved on tire costs. Mail the coupon today for my FREE services and tire recommendations.

Specify B.F.Goodrich tires when ordering new equipment.

B.F.Goodrich Smileage!

©The B. F. Goodrich Company

The B.F.Goodrich Company
Department TW-788, Akron 18, Ohio

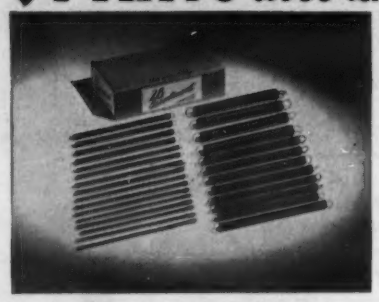
☐ Please send me information on All-Purpose tires.
☐ Please send me information on "wired" pneumatic tires.
☐ Please have my Tire and Wheel Analysis man call.

NAME _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____

B.F.Goodrich *industrial tires*

▲ For more details circle NED-143 J9 on enclosed inquiry slip ▲

Stock SPRING assortments



Our #28 (extension) Spring Assortment folders are now available and yours for the asking. Our #31 (compression) Spring Assortment folders are also available. Ideal for tool rooms and maintenance work.

To overcome the faults of ordinary assortments, which seem to contain "every spring except the one needed", design efforts were not confined to the springs alone; rather, loadings and dimensions were analyzed to assure the user of greater probability in having the correct spring on hand, whatever the application.

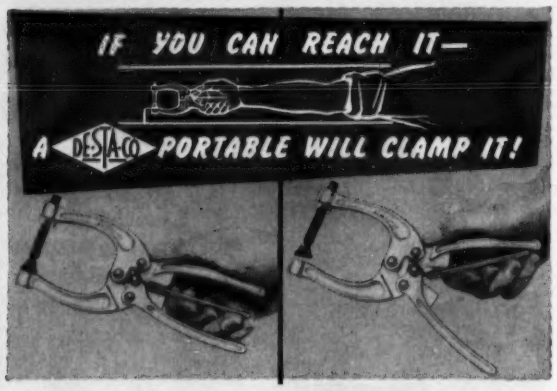
Find Your Nearest Paragon Agent in The Yellow Pages

We also manufacture to special order.

Send samples or prints for quotation.

PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

▲ For more details circle NED-144 J9 on enclosed inquiry slip ▲



Thousands of awkward clamping problems have been solved by the use of De-Sta-Co Portable Clamps. The *new* 2-way trigger release on Model 462 above illustrates easy one-hand releasing by pressing trigger toward either handle, essential in many blind or awkward operations. You now have a selection of two dozen basic portable models, including such features as . . .

★ *Two-way Trigger Releases* ★ *Flexi-matic and Pressure-matic spindles* ★ *Deep jaws* ★ *Non-magnetic materials for special applications* ★ *Light weight models* ★ *Special adaptations for your job*

De-Sta-Co Portables offer openings ½" to 6", throat depths to 3½", pressures from 35 lb. to 1200 lb. Send for catalog covering over 130 types, sizes and models of portables and *fixture* clamps—and name of stocking distributor.

Also De-Sta-Co stampings, washers, spacers, shims, shim stock, feeler stock, blower housings, marine specialties.

DE-STA-CO DETROIT STAMPING CO.
360 MIDLAND AVENUE • DETROIT 3, MICHIGAN

▲ For more details circle NED-145 J9 on enclosed inquiry slip ▲

FREE BOOKLET may solve your hand tool problem . . .

It's yours for the asking: Sargent's new booklet "Industrial Application Data for Plier-Type Tools." Contains detailed case histories on cutting, shaping, crimping, punching and holding problems solved with Sargent precision hand tools. Describes and illustrates Sargent's parallel action, compound hand pliers, punches and special purpose tools many of which are designed on a custom basis. Mail coupon now for your copy.

SARGENT & COMPANY, New Haven 9, Conn. Dept. 19-J

Gentlemen: Please send me your new booklet "Industrial Application Data for Plier-Type Tools."

Name _____ Title _____

Company _____

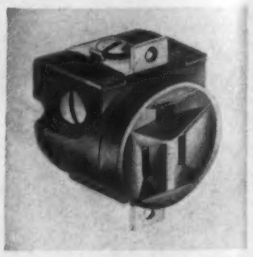
Street _____

City _____ Zone _____ State _____

Sargent & Company, New Haven 9, Conn. Dept. 19-J
Manufacturers of quality locks, hardware and tools since 1864.

▲ For more details circle NED-146 J9 on enclosed inquiry slip ▲

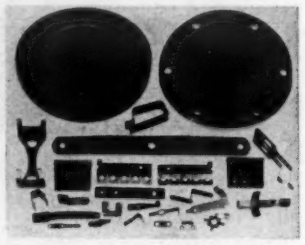
THREE-WIRE OUTLET for 125 and 250-v service



Heavy - duty three - wire grounding outlets with contoured faces to facilitate insertion of cap blades are available in 125-v ratings with parallel slots, or 250-v ratings with tandem slots for back or side wiring. Back wiring is accomplished by inserting wires in holes and tightening binding screws. A handy strap gage is provided on the back. A green hexagonal grounding terminal is located at the end of the device, which is offered in brown or ivory in various strap dimensions. Made by **Pass & Seymour, Inc.,** Solvay Station, Syracuse 9, N. Y.

▲ For more details circle NED-147 J9 on enclosed inquiry slip ▲

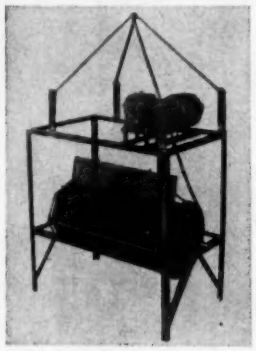
PHOSPHOR BRONZE STAMPINGS custom made to close tolerances



Phosphor bronze stampings for clips, springs, diaphragms, and other parts are produced to customer's specifications. Tolerances as close as ±0.002 and concentricity in circular parts within ±0.003 in. can be held. Bronze is supplied in any desired temper and thickness. Stamping service is offered by **Federal Tool & Mfg. Co.,** 3600 Alabama Ave., Minneapolis 16, Minn.

▲ For more details circle NED-148 J9 on enclosed inquiry slip ▲

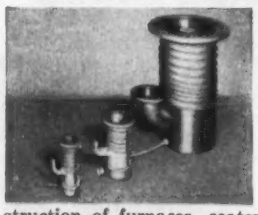
CUSTOM TUMBLING BARRELS for cleaning and chemical treating



Processes that require immersion, removal, and reimmersion of metal parts can be performed in custom-built stationary and portable tumbling barrels. Suited for cleaning and chemical treating, they are equipped with ¼ hp or larger G-E motor and an Eberhardt-Denver speed reducer to regulate the revolving immersion cycle. Barrel shafts ride on ball bearing pillow blocks. They are made of Monel, stainless steel, and various other metals. Barrels are supported on arc welded frames. Dimensions are to specifications. Both portable and stationary types are handled in and out of tanks by hoists or cranes, and can be furnished with or without legs. Made by **Wiretex Mfg. Co.,** 40 Mason St., Bridgeport 5, Conn.

▲ For more details circle NED-149 J9 on enclosed inquiry slip ▲

NEW COMPACT, HIGH CAPACITY VACUUM DIFFUSION PUMPS



Up to 50% { More Speed / Less Height

These new pumps permit more compact construction of furnaces, coaters, or other high vacuum equipment. Can double capacity of present installations.

New jet design results in greater capacity, reduced size, and lower cost. Stainless steel housings, easily demountable aluminum jets, long life heaters reduce maintenance and down time.

Model No.	Inlet Diam.	Total Height	Max. Speed Liters per Second	Max. Fore-Pressure mm Hg.	Ultimate Pressure mm Hg.	Price F.O.B. Newton
H-2-SP	2"	10"	70 l/s at 5 x 10^{-5}	0.2	5 x 10^{-7}	135.
C-4-P	4"	11"	280 l/s at 5 x 10^{-6}	0.2	5 x 10^{-6}	175.
H-10-SP	10"	24"	2800 l/s at 2 x 10^{-6}	0.2	5 x 10^{-7}	745.

Other pumps available with capacities to 30,000 l/s. Write today for details.

Dept.29-I, 160 Charlemont St., Newton 61, Mass. Decatur 2-5800

NRC EQUIPMENT CORPORATION

▲ For more details circle NED-150 J9 on enclosed inquiry slip ▲

NEW
Bear BeKomatic Balancers
Revolutionize
HIGH PRODUCTION Balancing

Single Lever Control Does It!

A flick of the wrist shows both magnitude and location of unbalance. Unskilled workers can balance up to 200 parts an hour . . . sitting or standing. One large dial tells operator everything he has to know to do perfect balancing.

Write for FREE DATA BULLETINS giving full information on both BeKomatic and Bear Balancers.

652

BEAR®
the most complete line for both PRODUCTION and MAINTENANCE BALANCING
BEAR MFG. CO., Dept. N-28, Rock Island, Ill.

▲ For more details circle NED-151 J9 on enclosed inquiry slip ▲

AUTOMATE At Any RATE

Graham

VARIABLE SPEED DRIVES . . .

give you the accuracy, wide range and reliability of a mechanical drive in combination with your present electrical or pneumatic control system or new controls, if needed.

COMPARE THE GRAHAM

All speeds from top to zero . . . Utmost accuracy of set, holding and reset . . . Immediate response to control signal . . . Controllable from 3-15 psi, 0.5 to 5 ma, or signals from any electrical transducer . . . Utilizes analog, frequency or parallel binary signals.

Graham **TRANSMISSIONS, INC.**
Menomonee Falls, Wisconsin
Ask for Graham Catalog 550.

SEE OUR CATALOG IN SWEET'S PRODUCT DESIGN FILE OR WRITE FOR COPY

▲ For more details circle NED-152 J9 on enclosed inquiry slip ▲

NEW GRACO PUMP eliminates messy transfer of paint from a closed end of 55 gallon drum . . . lets you spray unpigmented paints, primers, lacquers, etc., direct from the 2" end bung. Use it for direct supply painting or for feeding up to 5 spray guns in a circulating system. You apply fine finishes fast and at surprisingly low initial equipment cost. Air-powered pump is easy to handle . . . weighs only 17½ lbs. See your GRACO supplier or write today for details.

FREE IDEA BOOK SHOWS GRACO PUMPS FOR EVERY NEED. SEND FOR IT TODAY!

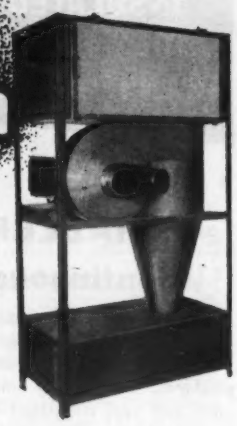
GRACO
97 Graco Square
Minneapolis 13, Minnesota

(See Phone Book Yellow Pages, "SPRAYING," for Graco Suppliers)

▲ For more details circle NED-153 J9 on enclosed inquiry slip ▲

EFFICIENT–LOW COST

Dust Collection



Easy installation . . . efficient low-cost operation . . . simplified maintenance, make Dustkop *FIRST* among equipment to collect most all industrial dusts. There are Dustkop models to eliminate your dust problems . . . that are space saving, self-contained units, or exhaust type for rafter, ceiling or outside location. Write for descriptive literature.

DUSTKOP STOPS DUST

37 STANDARD MODELS TO CHOOSE FROM

• READY TO USE

Also a Complete Line of Mist Collectors

AGET MANUFACTURING COMPANY
1396 E. CHURCH ST. • ADRIAN, MICHIGAN

▲ For more details circle NED-154 J9 on enclosed inquiry slip ▲

How to select WORM GEAR Drives

FREE TO DESIGN ENGINEERS

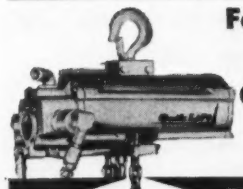
NEW Bulletin 218

Complete up-to-date information on Cone-Drive double-enveloping worm gear drives. Provides all specification data plus "how to select and order".

CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan

▲ For more details circle NED-155 J9 on enclosed inquiry slip ▲

Faster Load Lifting With New Coffing Quik-Lift Air Hoist



12 MODELS
lift full load 10 feet
500-pound hoist— 7 seconds
1000-pound hoist— 9 seconds
2000-pound hoist—24 seconds

Speed, accurate control, safety and long life are combined in the new Coffing Quik-Lift Air Hoist to give you efficient hoisting power.

Smooth power flow and absolute control at all speeds and loads is provided by the heavy-duty, 8-blade rotary air motor, the air-cooled disc brake and sensitive controls.

The Coffing Quik-Lift Air Hoist is available in 500, 1000 and 2000-pound capacities—with either link or roller chain and with interchangeable manual pull-cord or push-button pendent controls. Ask your distributor or write for Bulletin ADH-79. **Coffing Hoist Div. of Duff-Norton Co., 803 Walter St., Danville, Ill.**

▲ For more details circle NED-156 J9 on enclosed inquiry slip ▲

EQUIPMENT CONTROL CONNECTORS for up to 600 v applications

Oval, round, and dual round styles with from 2 to 12 poles are offered in this equipment control connector for applications up to 600 v. Constructed of neoprene, connectors resist crushing, corrosion, water, and dirt. Receptacles fit standard factory outlet boxes. Hinged receptacle cover locks connector in place when fully engaged. Shrouds on male portion protect the contacts and assure a tight seal. Made by **Joy Mfg. Co.**, Electrical Products Div., 1201 Macklind Ave., St. Louis 10, Mo.

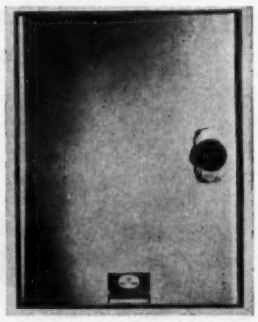
▲ For more details circle NED-157 J9 on enclosed inquiry slip ▲

SANITARY CASTERS light, medium, heavy duty models

Swivel and rigid sealed sanitary casters are designed for use in food handling and processing industries. Light, medium, and heavy duty casters are offered in 4, 5, and 6-in. diameters with Texite wheels which protect floors. Forged steel top plate is zinc plated. Swivel and wheel bearings are prepacked with lubricant, yet can be purged through grease gun fittings. Made by **Albion Industries, Inc.**, Albion, Mich.

▲ For more details circle NED-158 J9 on enclosed inquiry slip ▲

KEY CABINETS equipped with combination locks



Maximum security is offered in key control systems by use of TelKee cabinets, available with several combination lock options. All wall cabinets, with capacities from 25 to 450 key hooks, and the Diplomat wall table model with 500 to 1200-key capacities are offered with standard Sargent & Greenleaf Type CLSA combination lock, or the Tel-Kee Type CLSB spy-proof lock. The 150 to 450-capacity Aristocrat and Diplomat models have manipulationproof Type CLSC lock with 1 million combination changes and security against entry through sense of touch or sound, or "reading" by electronic listening devices. Latter series is also made with Type CLSA and CLSB dead bolt locks with 8000 possible combination changes. Made by **P. O. Moore, Inc.**, Glen Riddle, Pa.

▲ For more details circle NED-159 J9 on enclosed inquiry slip ▲

NEW COFFING SEALED HOIST

For Efficient Hoisting in Any Weather

Here is a new hoist designed for safe, efficient hoisting in any weather. Loads will not slip because the brake mechanism is permanently sealed in five places against moisture, oils, chemicals and dirt —all common causes of hoist slippage.

The spring-loaded Neoprene seals assure that brake performance will remain constant under all exposure conditions.

Safety features include the exclusive Safety Handle which bends to indicate overload. The free chain control is protected so that it will not accidentally trip.

Five models, ¾, 1½, 3, 4½ and 6-ton capacities are available. Ask your distributor for Bulletin ADH-78. **Coffing Hoist Division, Duff-Norton Company, 803 Walter Street, Danville, Ill.**

▲ For more details circle NED-160 J9 on enclosed inquiry slip ▲

INDUSTRIAL INKS To Mark Anything!

Whatever the substance, Phillips has an ink to mark it permanently and legibly—or can make one. Marking experts insist on "Clear Print" Wood Block Stamp Pads and Opaque Inks. They get clear, sharp, fast-drying impressions. Also inks for brush, pen, stencil or machine application available in a variety of colors and quantity containers.

★ Quick Laboratory Service On Your Problem Markings

★ To Permanently Mark . . . Metals, Plastics, Glass, Wood, Paper, Leather, Ceramics—glazed, varnished or lacquered surfaces and virtually every other known material.

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
192 MILL STREET
ROCHESTER 14, N.Y.

▲ For more details circle NED-161 J9 on enclosed inquiry slip ▲

Quick Disconnects for Air—Fluids—Gases

These Series "D" Quick Couplings are interchangeable with all popular makes. They are ideal for fluid or gas applications up to 10,000 p.s.i. for Compressed air lines, Pneumatic tools, Industrial fluids, Instrumentation, Materials handling.

Features

- Small and Compact Greater flow, positive seal
- Quick Automatic Locking Just "plug in". No turning or twisting
- One Hand Operation Fast and easy. Saves time
- Full 360° Swivel Prevents kinking or twisting of hose
- Integral Check Valve Connect or disconnect under pressure
- Brass Sockets Cadmium plated steel plugs
- Pipe Sizes ⅛" through ¾"

Write for Bulletin #1500 D

"WHERE *Good Connections* COUNT"®

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N.C.
Baltimore—Buffalo—Camden, N. J.—Chicago
Cleveland—Los Angeles — New York—Providence
Hamilton, Ont.—Montreal—Toronto

▲ For more details circle NED-162 J9 on enclosed inquiry slip ▲

Load Handling is Easy— Safe with COFFING . . .

Quik Lift

DUFF-NORTON

ELECTRIC HOISTS

It's easy for the operator to raise or lower loads while pulling a trolley mounted Coffing Quik-Lift Electric Hoist. The design of the pistol-grip control station and the combination strain and power cable makes this possible. The light aluminum housing is in sections to give easy access for changing voltages, limit switch, type of suspension or chain.

For safety the control station is made of non-conducting plastic in which the voltage is reduced to 115 volts. The V-type brake gives maximum braking surface and positive control of loads. For efficiency specify Coffing Quik-Lift. Twenty models—¼ to 2 ton capacity. Ask your distributor or write for bulletin ADH-65. **Coffing Hoist Division of Duff-Norton Company, 803 Walter St., Danville, Ill.**

▲ For more details circle NED-163 J9 on enclosed inquiry slip ▲

WELD TYPE FITTINGS for use with Anchor Flanco Couplings

These new fittings provide greater flexibility for the fabrication of hydraulic transmission lines made from pipe or tubing, and more convenience in assembly to a hydraulic circuit. Pipe threads and pipe fittings, with all their inherent piping problems, can be eliminated, and pipe or tubing assemblies with better flow characteristics are produced.

Four socket-head screws are used to bolt these new forged steel, weld type fittings to valve or pump bodies. Anchor FLANCO SAE 4-Bolt, Split-Flange Clamp Halves and "O" Ring Flanged Head Couplings are used to connect flexible hydraulic hose to pipe or tubing assemblies.

Anchor's new weld type fittings are designed in straight, 90° elbow and tee styles for pipe ends, and in saddle style for welding onto pipe or tubing between ends. With these weld type fittings, pipe or tube assemblies of any shape for any number of openings can be produced. Standard weld type fittings are suitable for working pressures up to 3000 psi.

Andy Anchor says: For complete details and specifications on my new Weld Type Fittings write for Supplement to Catalog 402 today

ANCHOR COUPLING CO. INC.
343 North Fourth St., Libertyville, Ill.
Branch Plants: Dallas, Tex.—Plymouth, Mich.

▲ For more details circle NED-165 J9 on enclosed inquiry slip ▲

CONFIDENCE where control counts

Temperature Controls for Industrial, Aircraft, Marine, Special Purpose

APPLICATIONS: Unlimited. For 28 years, we have been designing and manufacturing controls to fit individual needs.

MEDIUM: Air, liquid or hotplate.

RANGE: −150 to +650°F, adjustable.

SENSITIVITY: ±.5°F and up.

SWITCHES: Normally closed, open or double throw. Manual reset, high ambient and others available. 15 or 20 amps. 115/250 Volts AC. Also DC.

TYPES: Local mounted, remote bulb, skeleton or enclosed, calibrated or uncalibrated, single or multi-switch, indicating, explosion-proof, minimum size and special purpose.

OPERATION: Precision-made, liquid filled bellows combine with full rated snap-action switches for quick, accurate response to temperature change.

For further information request Condensed Catalog #400.

UNITED ELECTRIC CONTROLS COMPANY
88 School St., Watertown, Mass.

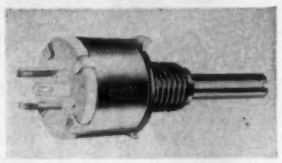
▲ For more details circle NED-166 J9 on enclosed inquiry slip ▲

CONVEYOR OVERLOAD CONTROL for overhead trolley systems

Safety as well as prevention of damage to system or goods is assured by this Tipp-Tronic overload safety control for installation on new or existing trolley or overhead conveyor systems. Control monitors the load on the drive motor or motors. A predetermined overload shut-off point is set up, and any load over this amount will stop the conveyor. Control is adjustable and self-compensating for start-up surges. It provides safety to plant personnel, protection against under-lubrication, prevention of damage from "hang-up," warning of broken or jammed trolleys, and prevention of motor overload. Offered by **American MonoRail Co.**, Conveyor Div., Fourth & Franklin Streets, Tipp City, Ohio.

▲ For more details circle NED-167 J9 on enclosed inquiry slip ▲

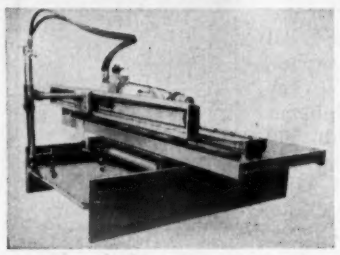
VARIABLE RESISTOR has 100 ohm to 5 megohm range



High stability of ½-in. diameter Series 600 Ceratrol variable resistor is derived from use of high temperature metal-ceramic resistance elements. Unit is offered in power ratings of ¾ w at 85° C, ½ w at 125° C, and zero load at 175° C. Resistance range is 100 ohms through 5 megohms, and temperature range is −63 to 175° C. Load life is 1000 hr at 350 v maximum. Made by **Chicago Telephone Supply Corp.**, 1210 W. Beardsley Ave., Elkhart, Ind.

▲ For more details circle NED-168 J9 on enclosed inquiry slip ▲

BEAM CUTTER-BEVELER uses controlled cutting torch



Fast, low-cost cutting and beveling of beams and structural shapes are performed by this compact burning machine. It cuts with a torch. Only one set-up is needed because built-in adjustments enable machine to make square, vertical, and horizontal cuts to close tolerances. Attachments permit miter cuts to 45 degrees. Machine will square and bevel all angles, handle up to 48-in. I-beams, and cut and bevel plates up to 60 in. wide. Reversible, governor-controlled 115-v ac or dc motor provides cutting speeds from 4 to 30 ipm, forward and reverse. Made by **Alamo Iron Works**, Hoefgen & Montana Streets, San Antonio, Tex.

▲ For more details circle NED-169 J9 on enclosed inquiry slip ▲

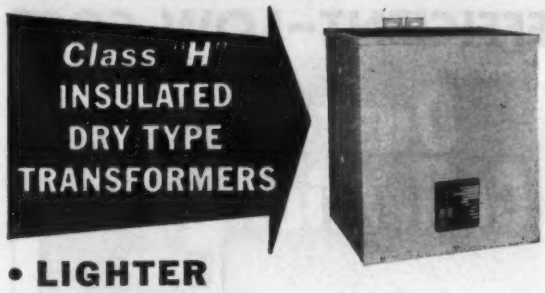
TYPE "U" DRIV-LOK PIN

Identical ends of the Type "U" DRIV-LOK Pin have a short pilot which permits easy insertion of *either end* into the hole. Result: Type "U" Pins can be fed automatically, or, because the operator need not examine the pin before insertion, manual feeding is faster and easier. Full length pardllel grooves provide maximum locking effect. Typical applications include keying gears, collars, knobs, handles to shafts.

Write for the NEW DRIV-LOK Catalog. Contains full details on DRIV-LOK Grooved Fasteners.

DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

▲ For more details circle NED-170 J9 on enclosed inquiry slip ▲



• LIGHTER
• SMALLER • QUIET

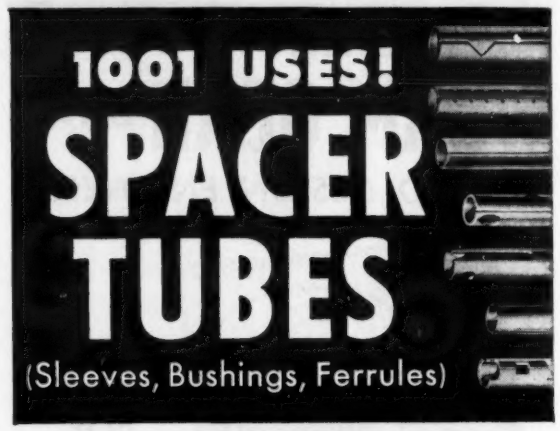
Continuous Duty Service

If you're limited for space, or the installation must be made in an "awkward location", then this line of lighter weight, smaller size, transformers is the answer to your problem. Completely enclosed, drip proof design with core and coil construction featuring air paths to avoid heat build-up. Comparably lower noise level. Available ratings of 5, 7½, 10 and 15 KVA; primary voltages: 240X480, 120X240, 240, 480, 600 volts. Secondary voltages: 120/240 volts. Write for catalog.

ACME ELECTRIC CORPORATION
309 WATER STREET • CUBA, N. Y.

Acme Electric TRANSFORMERS

▲ For more details circle NED-171 J9 on enclosed inquiry slip ▲



Save Money on Many Jobs!

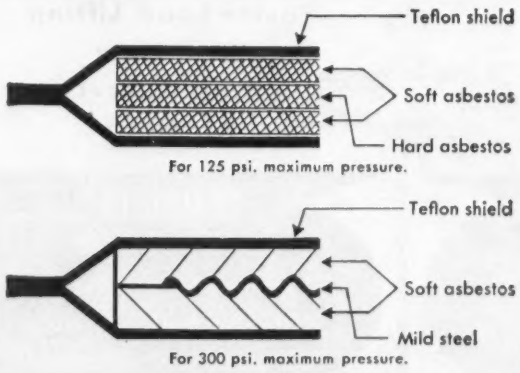
Investigate the substantial savings possible with rolled, split steel spacer tubes. They replace costly pipe, tubing or machined parts, eliminate cut-off or de-burring time, come ready for assembly, to your exact dimensions. Now saving money on thousands of applications from cars to phonographs, bicycles to chain hoists!

FREE CATALOG

Shows wide range of standard sizes, also special features that can be included. Write for your copy today!

FEDERAL-MOGUL DIV.
Federal-Mogul-Bower Bearings, Inc.
11079 SHOEMAKER, DETROIT 13, MICHIGAN

▲ For more details circle NED-172 J9 on enclosed inquiry slip ▲



High-pressure corrosion-resistant gaskets

The unique Pfaudler design Teflon envelope gaskets for Glasteel and other process equipment give you versatile corrosion resistance plus a tight seal without flange damage.

Type CLT withstands heat up to 500° F. (300° F. under prolonged exposure) and internal pressures to 125 psi.

Type CRT, made with a thin corrugated mild steel core, takes pressures up to 300 psi and temperatures to 500° F. It has a springlike action that helps keep the seal tight and reduces the need for shimming. Special flange designs permit service up to 1000 psi.

For your FREE copy of Bulletin No. 529, write our Pfaudler Division, Dept. NED-99, Rochester 3, N. Y.

PFAUDLER PERMUTIT INC.

▲ For more details circle NED-173 J9 on enclosed inquiry slip ▲

Leak Lock STOPS LEAKS where other compounds fail!

Here's a simple, economical solution to many troublesome leaking joint problems. Leak Lock holds LP, gasoline, oils, gases, petro-chemicals and refrigerants that eat through ordinary joint compounds. It's remarkably tough, highly adhesive, remains flexible indefinitely . . . the joint compound that stretches rather than breaks. Years of use have established its advantages in stopping wasteful or hazardous leaks in the petroleum, chemical, atomic energy, electronic, refrigeration and other fields.

Approval by Underwriters' Laboratories for Gas and Oil Equipment List: Also for Propane and Butane.

FREE SAMPLE—Leak Lock is available in handy tubes and in cans. Write on your letterhead for sample tube.

HIGHSIDE CHEMICALS INCORPORATED
14 Colfax Avenue • Clifton, N. J.

▲ For more details circle NED-174 J9 on enclosed inquiry slip ▲

FOR FANNING HARD-TO-HANDLE SHEETS

New design! New magnetic power!

ERIEZ HI-POWR

Ceramic magnetic SHEET FANNERS

Strongest sheet fanners made! New magnetic circuit design gives stronger, snappier fanning action for semi-sticky, bent and heavy-gauge sheets. Increases production...greater safety factor . . . saves manhours . . . eliminates marred surfaces and "doubles". For sheets up to ⅛" thick, stacked up to 14" high.

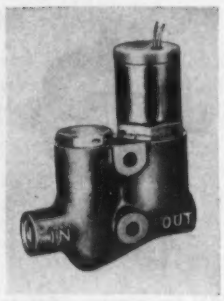
Marked improvement in handling heavier sheets—up to .125" thick • Enclosed, embedded magnetic circuit is tamperproof, rugged • Stainless steel U-frame construction • Easily fastened to any flat surface.

GET COMPLETE DETAILS. WRITE TODAY TO:
Eriez Mfg. Co., 80WA Magnet Drive, Erie, Pa.

ERIEZ

▲ For more details circle NED-175 J9 on enclosed inquiry slip ▲

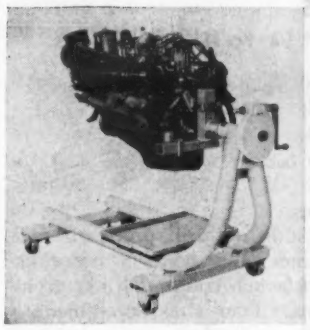
TWO-WAY SOLENOID VALVE is pilot-operated hydraulic unit



Suited for hydraulic service to 3000 psi in temperature range of −65 to 275° F, this leak-proof two-way pilot-operated solenoid valve will control flow of hydraulic and other fluids. Cartridge type continuous-duty solenoid is easily removed and operates on 28 v, 0.185 amp dc. Made by **Fluid Regulators Corp.**, 313 Gillette St., Painesville, Ohio.

▲ For more details circle NED-177 J9 on enclosed inquiry slip ▲

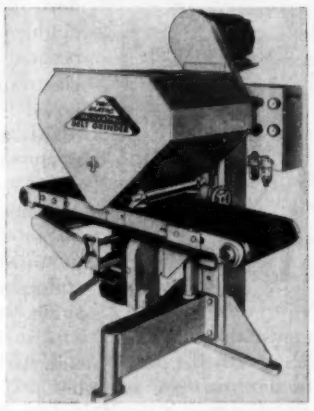
ADJUSTABLE REPAIR STAND holds workpiece in any position



Virtually any workpiece can be held in any position by the Adjusta-Mount repair stand. It can mount standard vehicle engines, marine and industrial engines, machine assemblies, and similar work weighing up to 900 lb. Movable blocks and wing attachments on the heavy-duty T-shaped mount can be positioned to pick up any series of bolt holes on the engine's bell-housing end. Holding arms are used to hold workpieces other than engines. Made by **Houdaille Industries, Inc.**, Manzel Div., 315 Babcock St., Buffalo 10, N. Y.

▲ For more details circle NED-178 J9 on enclosed inquiry slip ▲

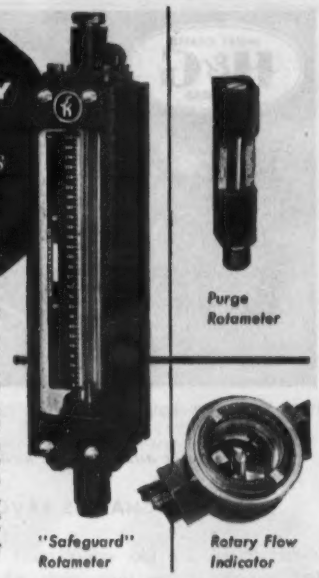
OSCILLATING BELT GRINDER deburs, descales, grinds, polishes



Continuous belt oscillation is maintained and controlled by air-jet sensing on the Tri-Matic oscillating belt grinder. It has variable and adjustable lateral travel and lateral travel speed. Clearance between conveyor belt and abrasive work belt is adjustable from 0 to 5 in. Conveyor belt is driven by a ½-hp motor at speeds variable from 60 to 120 ipm. Work belt is driven by a 5-hp motor at 5000 sfpm, making the machine suitable for deburring, descaling, grinding, and polishing work. Offered by **Sales Service Mfg. Co.**, 2363 University Ave., St. Paul 14, Minn.

▲ For more details circle NED-179 J9 on enclosed inquiry slip ▲

FAST DELIVERY on Rotameters and Flow Indicators



SK makes a complete line of Rotameters and Flow Indicators. For quick delivery the company stocks popular types and sizes. If you need action fast, contact us stating your requirements. We'll let you know if a stock item is available and, if not, what we can do to expedite delivery. Call us at Cornwells Heights, Bucks County, Pa., "MErcury 9-0900" or contact us by TWX, "Cornwells, Pa., 69." Ask for the INSTRUMENT DIVISION.

SK's complete line of Rotameters for accurately measuring fluid rate of flow and Flow Indicators for indicating flow are briefly described in Bulletin M-1. Write for your copy.

Schutte and Koerting COMPANY
INSTRUMENT DIVISION
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

▲ For more details circle NED-180 J9 on enclosed inquiry slip ▲

EASY TO APPLY. PLIOBOND requires no mixing, brushes on, dries rapidly.

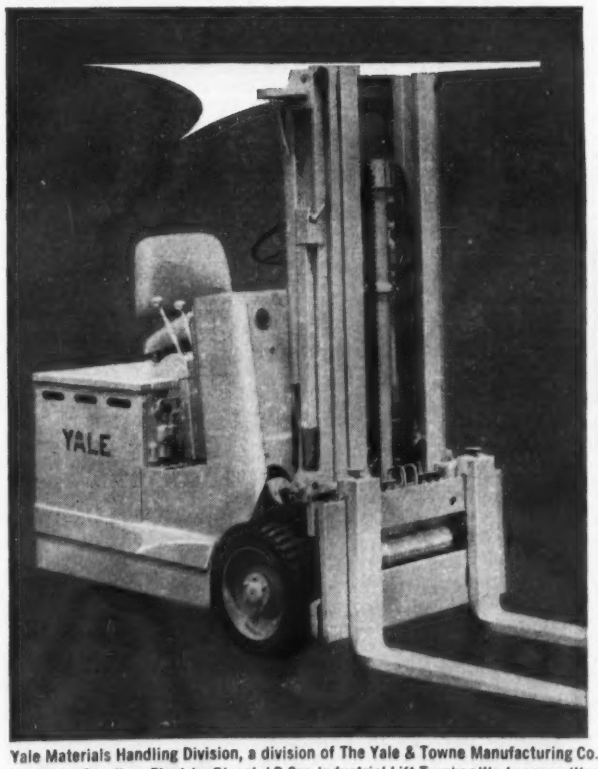
EXCELLENT ADHESION. PLIOBOND exhibits exceptional strength—up to 1600 lbs./sq. in. in shear tests.

EXTREMELY DURABLE. PLIOBOND resists age, heat, cold, water, chemicals, oils.

Pliobond BY **GOODYEAR**

Pliobond—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle NED-181 J9 on enclosed inquiry slip ▲



NEW CONCEPTS IN DIMENSIONS FROM YALE

NEW YALE ELECTRICS • LOW • SPEEDY • MANEUVERABLE

- Mechanically actuated carbon pile for smooth speed control...produces infinite motor speeds for any operation cycle.
- Dual caster wheels mounted on ball bearings provide easy steering.
- Short turning radius!
- Capacities: 2,000 and 3,000 pounds.

For full information contact your Yale representative or write The Yale & Towne Manufacturing Co., Materials Handling Division, Philadelphia 15, Pa., Dept. KT4-H.

YALE®
INDUSTRIAL LIFT TRUCKS
TRACTOR SHOVELS • HOISTS
YALE & TOWNE

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Co. **Manufacturing Plants:** Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. **Products:** Gasoline, Electric, Diesel, LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Industrial Tractor Shovels • Hand, Air, Electric Hoists

▲ For more details circle NED-176 J9 on enclosed inquiry slip ▲

STYLE AND SIZES FOR ALL MACHINES ON WHICH THREADS ARE CUT

On Brown and Sharpe, and other automatics

INSERT CHASERS SAVE UP TO 33%

Insert chasers are like safety razor blades: they cost so little that you can throw them away when dull. Or, for utmost economy, you can resharpen them over and over again. Only a flash grind is required. For approximately $50 you get a dozen sets of ¾—16 insert chasers, each set ground ready to go. You will be amazed at the quantity of threads they will cut, even to Class 3 specifications, with a minimum of downtime.

FREE: "UNIFIED AND AMERICAN SCREW THREAD DIGEST"

THE EASTERN MACHINE SCREW CORP., 28-48 Barclay St., New Haven, Conn.

▲ For more details circle NED-182 J9 on enclosed inquiry slip ▲

USERS REPORT **CARTON CLOSING BY STAPLING FASTER THAN TAPE—AT LESS COST!**

***International* "AIR BOXER" stapler**

REPORTS coming to us from CUSTOMERS all over the country are telling us how International "AIR BOXER" is CUTTING carton closing COSTS for these users. For example:

"OUR MATERIAL COSTS CUT! Often in HALF, because just a few wide crown steel staples do the work of many feet of tape, at lower cost."

"MORE EFFICIENT USE OF LABOR! No waiting for adhesives to dry . . . no double handling . . . just fill, staple, and ship!"

"BETTER CLOSURE IN EVERY WAY!" Gratified International customers sum it up as follows: "Cartons are sealed securely and neatly, stack better . . . pop-proof, pilfer-proof . . . ship safely and save on material and labor."

ASK YOUR INTERNATIONAL REPRESENTATIVE for further details, or write . . .

International Staplers

INTERNATIONAL STAPLE & MACHINE COMPANY
P. O. BOX 270 • HERRIN, ILL.

Originators of Carton Closing Staplers

▲ For more details circle NED-183 J9 on enclosed inquiry slip ▲

***The* OFFICE VALET**

Answer the Wraps Problem in Offices and Waiting Room

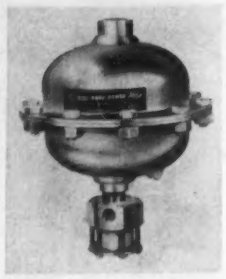
These efficient VALET Racks keep wraps off waiting room chairs, aired, dry and in press. Hold coats spaced apart, hats, umbrellas and overshoes. Accommodate 3 persons per running foot. Come in lengths of 3 ft 3 in. or longer by the foot. The S-6 Office Valet costumer accommodates 6 people—ends piling of garments on others. Will not tip over. Built for lifetime service of heavy gauge, welded furniture steel. Smart in modern baked enamel finishes. Units form a complete system of wardrobe equipment that provides efficient wrap accommodation wherever people gather.

Write for Bulletin OV-8

VOGEL-PETERSON CO.
1121 West 37th Street Chicago 9, Illinois

▲ For more details circle NED-184 J9 on enclosed inquiry slip ▲

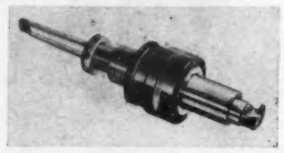
MAGNETIC AIR TRAP
handles corrosive gases and liquids



Usable wherever corrosive gases or atmospheres are a problem, this power operated, magnetically actuated, Model 501SS Mag - Pneu - Power compressed air trap is made of stainless steel. Snap-action opening and closing for automatic condensate discharge is aided by air pressure in system, even at low pressures. Usable for 10 to 200 psi service, this trap can also be used on gas lines to remove moisture. Made by **Hankison Corp.**, College & Pike, Canonsburg, Pa.

▲ For more details circle NED-185 J9 on enclosed inquiry slip ▲

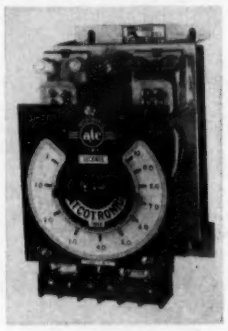
RECESSING TOOLS
seven sizes for ¼ to 4½-in. holes



Two types and seven sizes of these automatic feed recessing tools cover work hole diameters from ¼ to 4½ in. and up to 0.300-in. depth of cut. Tools are designed for use on standard drill presses, radial drills, and special machines, and perform relieving, grooving, chamfering, backfacing, counterboring, necking, and boring operations. Four sizes accommodate interchangeable stop collars and pilot-nose assemblies, whereas three sizes have standard pilot-nose blanks. Both types have either eccentric or concentric tool mounting. Accuracy is within 0.001 in. Made by **Scully-Jones & Co.**, 1901 S. Rockwell St., Chicago 8, Ill.

▲ For more details circle NED-186 J9 on enclosed inquiry slip ▲

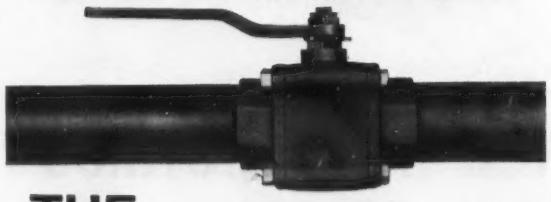
ELECTRONIC TIMER
conservative rating is 15 amp



Two heavy contact, four-pole double-throw relays are incorporated in the Model 5231-B electronic timer for short interval time control. The printed circuit unit is rated conservatively at 15 amp and operates on 115 v, 60 cycles. Modified version is available for 230 v, 50 or 60 cycles. Relays are mounted vertically to minimize collection of dust. Variety of single and dual timing ranges is available, including 0.02 to 1, 0.04 to 2, 0.05 to 3, 0.2 to 10, 0.4 to 20, and 0.5 to 30 sec. Maximum standard ranges available are 60 and 120 sec. Repeat accuracy is unaffected by line voltage fluctuations, tube aging, or vibration. Dust-tight, weatherproof, and explosion-proof covers are available. Made by **Automatic Timing & Controls, Inc.**, King of Prussia, Pa.

▲ For more details circle NED-187 J9 on enclosed inquiry slip ▲

COMPARE



THE ECON-O-MISER BALL VALVE . . . with DIAPHRAGM VALVES

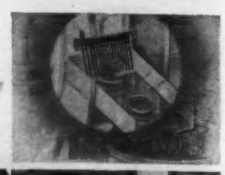
The **ECON-O-MISER** ball valve provides smooth, round, two-way flow! Easy to service without removal from the line . . . half million cycles not unusual . . . acts as both valve and union.

For revealing facts request bulletin EB 101.

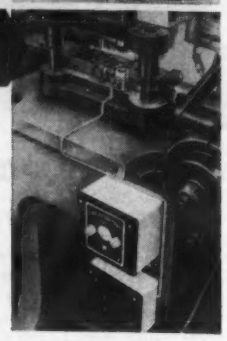
WORCESTER
VALVE CO., INC. / WORCESTER 10, MASS.

▲ For more details circle NED-188 J9 on enclosed inquiry slip ▲

new



CIRCUIT-MASTER missing parts detector



INSURES COMPLETE DIE PROTECTION
At Low Cost!

Your expensive dies just can't be damaged when parts fail to eject! The new Circuit Master Missing Parts Detector electronically disengages the clutch of any machine, stopping it before a second piece can cause an overload.
Additional features include the control of: misfeed, buckling, overload and end of material shut-off.
The Missing Parts Detector works on either friction or key clutches, on automatic or manual machines. It's completely automatic insurance for your expensive dies—no controls to set, no adjustments ever!

STOP DIE DAMAGE NOW! *Write, wire or phone today for bulletin NE-9, and name of nearest representative.*

WINTRISS, INC.
20 Vandam Street, New York 13 • Phone: CHelsea 2-0105

MASTER PRODUCTS W WINTRISS NYC

▲ For more details circle NED-189 J9 on enclosed inquiry slip ▲

NO MORE COSTLY WAITING LIKE THIS FOR ENGINEERING PRINTS . . .
install automatic XEROGRAPHY!

Until recently, one of the most exasperating bottlenecks in industry was the time it took to get engineering drawings copied.

Lineups before reproduction windows were not only common, but chronic. The time of highly skilled . . . and highly paid . . . personnel was lost.

Now, a spectacular breakthrough in the art of reproducing engineering drawings eliminates such waste.

Operating on the electrostatic principles of xerography . . . clean, fast, dry . . . a XeroX® Copyflo® printer—which enlarges, reduces, or copies size to size—automatically turns out prints up to 20 linear feet a minute. That's a print in seconds . . . dry, positive, ready for immediate use.

Just push the button . . . and copies flow! They may be on plain unsensitized paper, translucent vellum, or offset paper masters.

Combined with offset duplicating, a Copyflo continuous printer also makes feasible a stock-print system, in which multiple copies of drawings commonly used are run off in advance of need for self-service availability. Prints are so inexpensive that engineers are urged to discard them rather than re-file them. Costs are cut dramatically, and savings from $20,000 to $100,000 a year are being reported.

A XeroX Copyflo printer offers the fastest, most flexible, most economical way to get copies precisely like the original from microfilm or original documents.

PUSH THE BUTTON... *and copies flow!*

For complete details, write for booklet X-287

HALOID XEROX INC.
59-212X Haloid St., Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES
Overseas: Rank-Xerox Limited, London, Eng.

HALOID XEROX®

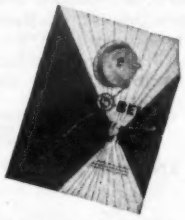
▲ For more details circle NED-190 J9 on enclosed inquiry slip ▲

NEW!

LINK-BELT SHAFT-MOUNTED SPEED REDUCERS

The ultimate in ease
- of purchasing,
- of mounting,
- of maintenance

New, versatile Link-Belt shaft-mounted speed reducers simplify and satisfy the majority of speed reduction jobs. Special features include: easy installation, fast belt tensioning, live-action lubrication, wide application flexibility, simplified selection, off-the-shelf availability. For complete facts, send for Book 2618. Address Link-Belt Company, Prudential Plaza, Chicago 1, Ill. 14,948



▲ For more details circle NED-191 J9 on enclosed inquiry slip ▲

HERE'S WHY

LINK-BELT CONVEYOR TROLLEYS

RIDE SMOOTHER . . . LONGER

1. EXTRA-LONG LIFE results from carburizing and heat treating wheels, machined from steel tubing.
2. FRICTION IS MINIMIZED because cages space steel balls accurately.
3. FREE-ROLLING ACTION AND HIGH CAPACITY are benefits assured by precision-ground raceways.
4. PRESS-FITTING of bolts or rivets is another long-life feature.
5. NO WHEEL "WOBBLE". Forged steel brackets provide strength to keep trolleys aligned.

15,005

NEW TROLLEY BOOK 2636 is now available. Send for your copy today.

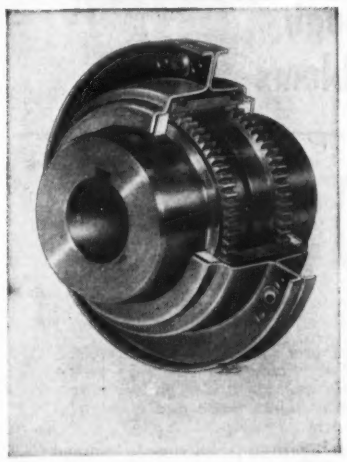
LINK-BELT

BALL BEARING CONVEYOR TROLLEYS
LINK-BELT COMPANY, Prudential Plaza, Dept. NED, Chicago 1, Ill.

▲ For more details circle NED-192 J9 on enclosed inquiry slip ▲

LOW PRICED . . . among high-quality flexible couplings

LINK-BELT MOTOR COUPLINGS



You're further ahead in every way with Link-Belt Motor Couplings.

Besides low initial cost, they provide savings in assembly and servicing. Allen head, spiral cam fasteners open and close with only a quarter turn.

All-metal design assures high capacity and durability. Also important, Link-Belt Motor Couplings are available off-the-shelf for shafts up to 1⅞".

FOLDER 2875 contains complete details. Send for your copy today.

LINK-BELT

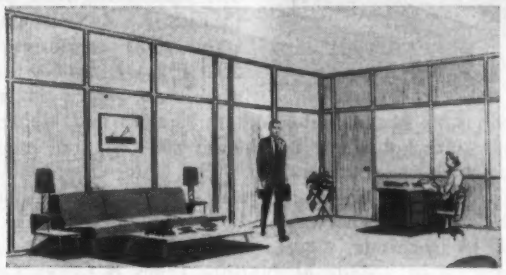
GEARED FLEXIBLE COUPLINGS

LINK-BELT COMPANY: Dept. NED, Prudential Plaza, Chicago 1, Ill. 15,158

▲ For more details circle NED-193 J9 on enclosed inquiry slip ▲

MOVABLE WALLS various colors, textures offered in several heights and widths

Five basic framing patterns offered in Decor movable walls are floor to ceiling, open ceiling, cubicle, low railing, and glazed rail. A two-piece expandable metal

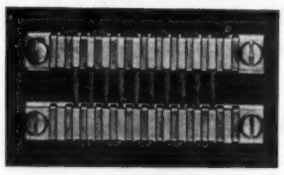


molding clamps any paneling material into place quickly, making possible a wide selection of wall colors and textures on panels from 1/8 to 5/8 in. thick. Panels are locked in place, making the wall a movable unit.

Cross sections for doors, windows, or ducts can be made anywhere along the channel frame. Among panel materials which may be used are clear, fluted, or frosted glass, chipboard, plywood, cement asbestos, expanded metal, and vinyl plastic laminates. Various heights and widths are offered in the walls which can be equipped with electrical accessories. Panel elements are easily disassembled and rearranged to suit changing needs, or panel materials can be changed to match decorating scheme. Made by **Decor Products, Inc.**, Partition Div., 11 Claflin St., Framingham, Mass.

▲ For more details circle NED-194 J9 on enclosed inquiry slip ▲

CABLE SHOCK ISOLATORS protect mounted equipment in three planes of motion



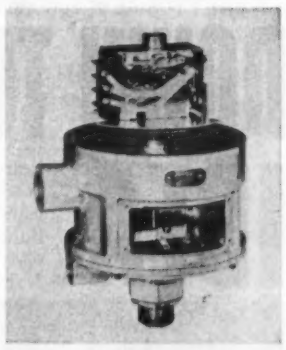
Equal isolation in three planes of motion is achieved with flexible cable vibration isolators, one of which is shown in photo. One bar is attached to the supporting structure, the other to the package or piece of equipment to be isolated. This arrangement is duplicated at all corners or points of support so that the piece "floats" in three-dimensional isolation.

Cable systems isolate from shock and vibration simultaneously in the presence of high steady-state loads. They will not bottom out. Arresting action is entirely in the twist and bend actions of the cables. Plurality of cable, the number of strands, and cable arrangement all affect antiresonance features.

Systems can be arranged to isolate equipment and gyroscopes from vibration and high G-loads in aircraft and missiles, or to mount motor-generators, electronic equipment, noisy machinery, and other assemblies. Cables show no evidence of noise transmission above 30 cps. System and isolators developed by **Kerley Engineering, Inc.**, 742 Investment Bldg., Washington 5, D. C.

▲ For more details circle NED-195 J9 on enclosed inquiry slip ▲

LEVEL CONTROL SWITCH head gives two-level control action plus alarm or shutdown



Mounted on a splashproof pneumatic J-1 switch mechanism, the Model J-1 S-1 VP tandem control head combines a two-level stage electrical switching action in a vaporproof and explosion-proof housing. Head can be set for either electric or pneumatic action on rising or falling level, regardless of the positioning of each mechanism. Using gas or air as an operating medium, pneumatic switch mechanisms are available with top-mounting, side mounting with float and stem in tank or vessel, and external float cage for piping to tank.

These corrosion resistant units will seal against 0 to 30-psi air in standard models, and up to 100 psi in special types. Various actions include air or electric high or low level control with electric or air over or under-ride for high or low level alarm or shutdown. Made by **Magnetrol, Inc.**, 2110 S. Marshall Blvd., Chicago 23, Ill.

▲ For more details circle NED-196 J9 on enclosed inquiry slip ▲

Choose from LINK-BELT's

long line of long-life elevator buckets

STEEL FABRICATED

Versatility keynotes Link-Belt's line of steel buckets. HS type is designed for high-speed, maximum capacity. High ends minimize spillage . . . low lip facilitates pickup. Salem buckets are shaped for handling granular or powdered, free-flowing materials. Continuous buckets offer clean discharge at low speeds of stone, ore and other bulky, gritty materials.

For complete details on these all-welded buckets, contact your nearest Link-Belt office or authorized stock-carrying distributor. Write for Book 1050.

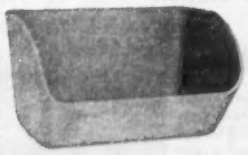
CAST AND MALLEABLE

STYLE AA — Recommended for heavy, gritty materials such as sand, gravel, stone. Has a reinforced lip for digging and added wear life.

STYLE B — Used on inclined elevators handling coarse materials. Low front design assures clean discharge at relatively low speeds.

STYLE C — Designed for easy, efficient handling of finely pulverized or wet materials that have a tendency to stick or pack.

STYLE D — This continuous bucket provides clean, gentle handling of coal, sand, gravel, crushed stone and other dry materials.



STYLE SC — Ideal for elevating either dry or relatively wet materials. Can handle greater capacities than styles A or C.

Correct bucket choice is a head start to low-cost elevating. And you'll find Link-Belt has cast buckets *exactly suited* to your material and capacity needs.

Link-Belt cast buckets are available in wear-resistant malleable iron or Promal. Corners are specially reinforced. Smooth surfaces, proper proportioning and rounded corners assure fast pickup, clean discharge. For complete details, write for Book 1050.

LINK-BELT

ELEVATOR BUCKETS

LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill. 18,089

▲ For more details circle NED-197 J9 on enclosed inquiry slip ▲

SIMPLE, ACCURATE "On-the-Spot" Pressure Control

MASONEILAN 2700 Series

MODEL 2707 — Valve or Wall Mounting

MODEL 2700 — Panel or Wall Mounting

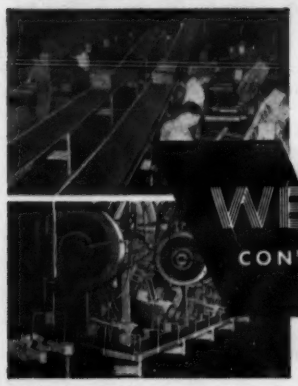
Complete line of simplified pneumatic proportional controllers for handling majority of pressure control applications. Inexpensive; easy to install; wide flexibility. Easy-to-adjust proportional band and set point. Narrow to intermediate proportional band setting. Pneumatic feedback, usually found in more costly controllers, delivers precise response. Similar 3700 Series also available for temperature control. SEND FOR BULLETIN . . . Find out how these low-cost controllers can handle a new broad range of applications.

MN7-4

MASON-NEILAN
Division of Worthington Corporation
41 Nahatan Street, Norwood, Massachusetts

▲ Complete Line of Control Valves, Control Instruments, Regulators, Liquid-Level Controllers and Special Process Control Equipment.

▲ For more details circle NED-200 J9 on enclosed inquiry slip ▲



Mid-western glass plant conveys air filters through assembly, shipping and boxing operations on Wendway.

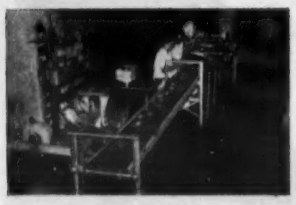
WENDWAY CONVEYS *Anything*

...ANYWHERE!

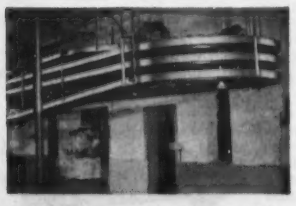
Wendway easily adapts and installs with existing equipment to speed processing and eliminate handling.

● If you move anything—product, carton, package, bag or assembly—from one machine to another...one room to another, you profit by installing a Wendway Light Product Conveying System. And no matter how you move those products now, Wendway can do it better. Faster, safer and more economically, too!

Because...Wendway is the most versatile, powered conveyor ever offered to industry. Readily available in a variety of standardized linked rod, belt widths on straight sections, curves, switches, multiple tiers—any combination you require to convey anything, anywhere.



Short, single tier units save storage space, equipment and man hours. Installations may be portable if desired.



Ceiling-mounted Wendway saves valuable floor space. Excellent for cooling or drying operations.

Wendway Slat-Type Conveyors—for Heavier, More Difficult Applications

Developed to meet the need for a highly dependable, extremely versatile, adaptable system with greatly increased carrying capacity (70 lbs. per lineal foot). Available in 24", 30" and 36" standard widths in powered or straight sections. Larger widths, special order.

Above: Close up of powered curve shows how individual slats smoothly negotiate curve without variation in spacing. Products ride smooth, safe, quiet.

Above: This photo illustrates the rugged, clean lined simplicity of the Wendway slat-type powered conveyor so popular for heavy duty applications.

WRITE TODAY . . . for additional information, specifications on a Wendway System to match your requirements. Recommendations without obligation.

UNION STEEL PRODUCTS CO.
Industrial Conveyor Division
ALBION, MICHIGAN

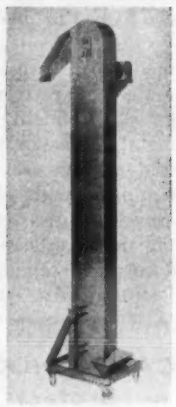
▲ For more details circle NED-201 J9 on enclosed inquiry slip ▲

GLASS-FIBER BOX TRUCK withstands up to 212° F

Lightweight chrome-impregnated glass-fiber box truck can be used for various plant handling jobs at temperatures from −40 to 212° F. It will withstand short exposures to 250° F. Lighter than aluminum, truck is impervious to steam, water, oil, mild acids and alkalies. Casters are bolted on full length steel channel members which cross the bottom. End casters are double-ball-race swivel types. Box has smooth inside surface with rounded corners. Smaller model measures 36 x 24 x 18 in. inside, whereas larger model measures 47 x 24 x 24 in. Made by **Nutting Truck & Caster Co.**, 1201 W. Division St., Faribault, Minn.

▲ For more details circle NED-202 J9 on enclosed inquiry slip ▲

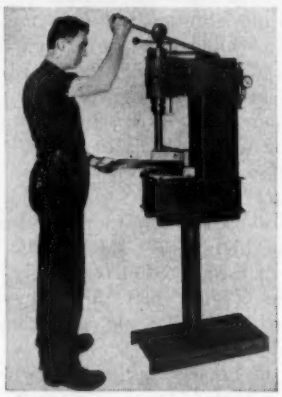
PORTABLE ELEVATOR moves granules to 12-ft height



Granular materials are efficiently carried to heights from 6 to 12-ft by this portable bucket elevator. Units are provided with electric motor drive, delivery chute, hopper, and casters to suit each application. Steel buckets are bolted to belt. Elevator is readily moved anywhere in the plant, or it can be used outdoors. Made by **New London Engineering Co.**, 1700 S. Division St., New London, Wis.

▲ For more details circle NED-203 J9 on enclosed inquiry slip ▲

BENCH ARBOR PRESS applies up to 10-ton pressure



Wide range of bending, straightening, forming, and punching jobs can be done with this 10-ton hand-operated hydraulic bench arbor press. Upon raising lever, ram lowers to work in a fraction of a second. When lever is lowered, hydraulic pressure is applied at up to 20 strokes per minute. Ram spring-returns to top position by flipping pressure release knob. Lever is adjustable to individual needs. A pressing plate and two matched V-blocks for straightening and bending are supplied with the press. Floor stand is optional. Made by **K. R. Wilson, Inc.**, Arcade, N. Y.

▲ For more details circle NED-204 J9 on enclosed inquiry slip ▲

NEW DOWN TO EARTH IDEA

Trailevation! Sensational new cost-cutter for industry! Developed by Trailevator, the amazing elevating trailer that lowers to ground level...elevates load to hauling position...hauls the load.

Learn how Trailevator can save you loading time, hauling time, man-power and money! Picture Bulletin T-58 tells the story.

WRITE TODAY! *Trailevator Division, Magline Inc., Pinconning, Mich.*

TrailevATOR
TAKES THE LIFT OUT OF LOADING
Dealerships available in some territories. Write for details.

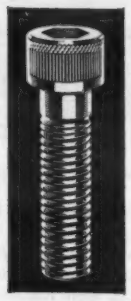
▲ For more details circle NED-205 J9 on enclosed inquiry slip ▲

The big change is in the threads

COMPARE THE THREAD ROOT FORMS. The old thread form has flat roots and sharp corners where cracks start. The larger root radius in UNBRAKO Hi-Life threads has smooth, flowing curve that distributes stresses for greater fatigue life . . . larger body cross section increases tensile strength, permitting greater preloads.

New UNBRAKO Hi-Life socket head cap screws offer:

- **Up to 100% greater fatigue life**
- **Increased tensile strength capacity**
- **Additional life insurance for your product**
- **All at no increase in cost**



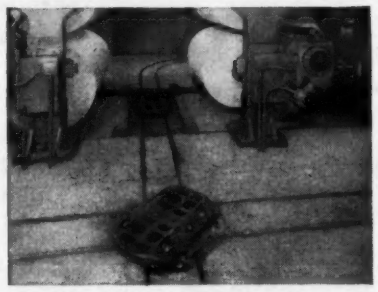
SPS distributors are now stocking these new precision fasteners with the improved thread root form, evolved through research on high-strength fasteners. Ask your SPS distributor for a copy of Bulletin 2577. Or write:

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

▲ For more details circle NED-206 J9 on enclosed inquiry slip ▲

Track and Dollies for 3000 lb. Rolls

SAVE TIME AND LABOR



Make roll handling safer and easier with a track system engineered by Dilts. Dollies are floor-loaded—lift truck traffic and crowded aisles are eliminated.

Dollies are mounted on anti-friction bearing rollers. Turntables, transfer tables, straight and curved track sections and switches are available in standard units to handle rolls up to 3000 lbs.

A Dilts engineered system is easy to install and requires no maintenance. Write for Specification Sheet 114.

THE BLACK-CLAWSON COMPANY
DILTS DIVISION • FULTON, N. Y.

▲ For more details circle NED-207 J9 on enclosed inquiry slip ▲

Simple way to solve tough piping problems

Slip follower rings and gaskets on pipe ends. Place middle ring over pipe end and stab pipe ends together. Slide gaskets under middle ring flares and followers. Insert bolts and tighten!

Dresser® Couplings solve piping problems of cramped quarters, vibration and stresses, or pipe misalignment . . . PERMANENTLY and ECONOMICALLY! Style 38 Coupling, designed for ⅜" to 72" pipes, makes a non-rigid, tight joint that allows up to 6° pipe deflection. Fast to install, easily dismantled. Booklet No. 531 gives many examples of typical, Dresser-solved piping problems.

Bradford, Pennsylvania
Chicago
Houston
New York
S. San Francisco
Toronto & Calgary

DRESSER
MANUFACTURING DIVISION

▲ For more details circle NED-208 J9 on enclosed inquiry slip ▲

Helicoid Gages give **Sustained Accuracy,** even on the toughest jobs

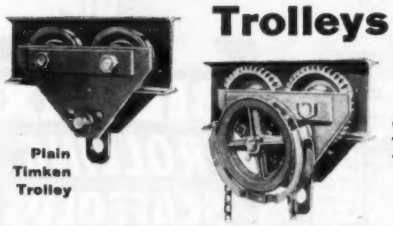
★ Exclusive Helicoid movement has no gears, no teeth. Shock-proof construction protects accuracy through millions of cycles.
★ Bourdon tubes available in four materials—bronze, steel, stainless steel, and K Monel—won't stretch, crack, or leak.
★ Six cases, including new solid-front safety case, meet every mounting requirement.
★ External pointer adjustment can't be jarred out of position.
★ A complete selection of gages and accessories for hydraulic, chemical, and other service.

Write for Catalog G-52.

HELICOID GAGES ACCO
Helicoid Gage Division
American Chain & Cable Company, Inc.
929-J Connecticut Avenue • Bridgeport 2, Conn.

▲ For more details circle NED-209 J9 on enclosed inquiry slip ▲

Smooth-Running Timken Roller Bearing Trolleys



WRIGHT Timken Roller Bearing Trolleys (shown), in plain or geared models, provide smooth, safe handling of ¼ ton to 40 ton loads with minimum of effort. Heavy steel side plates and chilled tread wheels revolve on Timken Bearings (two bearings to each wheel). Tapered bearing design absorbs both thrust and radial loads and thereby reduces the work required to move the trolley along I-Beam. Chilled wheel treads wear longer, assure wheel roundness. Wright Self Aligning Roller Bearing Trolleys in ½ ton to 20 ton models are also available.

Write to our York, Pa., office for Bulletin DH-242-B

WRIGHT TROLLEYS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-210 J9 on enclosed inquiry slip ▲

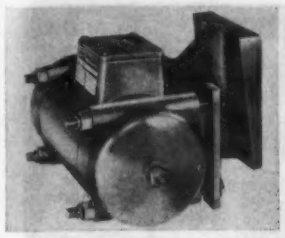
WRIGHT Safeway Hand Hoists—In 12 Sizes —½ Ton to 50 Tons

WRIGHT Safeway Hand Hoists are built to take it—inside and out. Sealed construction protects all vulnerable parts in high analysis steel housing. Gears, pinions, drive spindle (also top and bottom hooks) are nickel-chrome-molybdenum alloy steel mounted on anti-friction bearings. Gear train is enclosed in oil-tight chamber. Load wheel, with 5 or more pockets, can be reversed for double life. Alloy steel load chain is heat treated to resist wear, ductile to withstand shock loads. Weston type load brake. Factory tested at 50% overload. Write to our York, Pa., office for Bulletin DH-164C.

WRIGHT HOISTS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-211 J9 on enclosed inquiry slip ▲

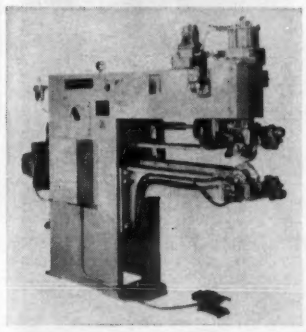
EXTERNAL BIN VIBRATOR for impacts from 500 to 1400 lb



Totally-enclosed, self-contained Tremix vibrator can be mounted permanently or temporarily on bins, hoppers, chutes, tables, classifiers, screens, and concrete forms. It can be used to move, pack, or screen bulk materials and will speed up flow or break down arching. Three models weighing 30, 40, and 60 lb provide impacts ranging from 500 to 1400 lb. Each delivers 3600 vibrations per min and operates on alternating current. Unit operates quietly and its eccentric weights can be adjusted for different applications. Made by B. W. Elliott Mfg. Co., Prospect Avenue, Binghamton, N. Y.

▲ For more details circle NED-212 J9 on enclosed inquiry slip ▲

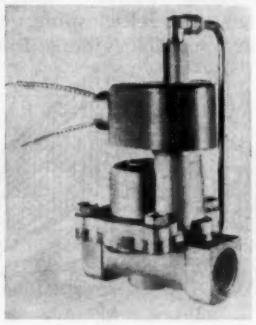
SEAM WELDER three sizes rated 50 to 400 kva



Offered in circular, longitudinal, or universal types, this line of standard seam welders includes three sizes ranging from 50 to 400 kva. Features include compactness for minimum floor space use, easy adjustment for wear or takeup, and large working area. Machines are designed for production use, and each is offered in a range of throat depths and transformer sizes. Made by Federal Machine & Welder Co., 212 Dana St., Warren, Ohio.

▲ For more details circle NED-213 J9 on enclosed inquiry slip ▲

SOLENOID VALVE for steam, hot gas, and light liquids

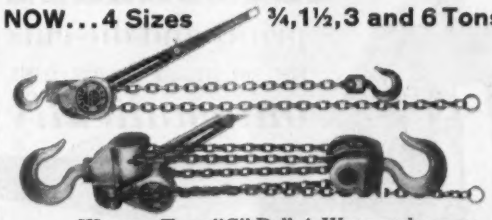


Full pipe area orifices in Acso two-way normally-open solenoid valves assure maximum flow. Made in ⅜, ½, and ¾-in. sizes, they will handle steam, gases, and light liquids at temperatures to 350° F and pressures to 125 psi. These internally-piloted controls have forged brass bodies and bonnets, renewable Teflon discs, and media contacting parts of brass, Teflon, stainless steel, or Viton A. Valves open on power failure, and solenoids for ac or dc service can be supplied. Made by Automatic Switch Co., Hanover Road, Florham Park, N. J.

▲ For more details circle NED-214 J9 on enclosed inquiry slip ▲

New ¾-ton Type "C" Pull-A-Way

NOW...4 Sizes ¾,1½,3 and 6 Tons

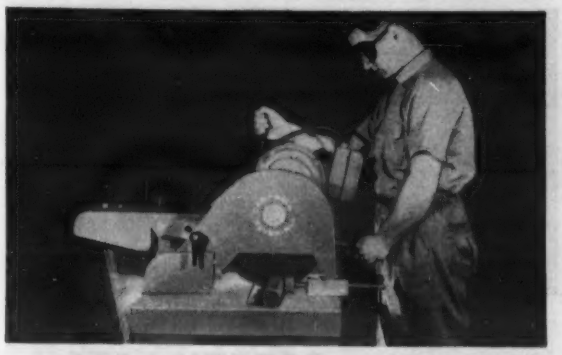


WRIGHT Type "C" Pull-A-Ways make easy work of hundreds of quick hook-up jobs. Now available in four sizes—¾, 1½, 3 and 6 ton—Type "C" Pull-A-Ways are portable, safe and rugged. Corrosion-resistant modern aluminum alloy castings are used for gear case, handle and covers of all models. Hooks, load chain and chain sheave are made of alloy steel. Positive, dependable load brake securely holds load at any point. Lubricated for life. Weights: ¾-ton, 14 lbs; 1½-ton, 23½ lbs; 3-ton, 36½ lbs; 6-ton, 63 lbs.

Write to our York, Pa., office for Bulletin DH-56A

WRIGHT HOISTS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-215 J9 on enclosed inquiry slip ▲



NEW Model 1-A SEVER-ALL CUTS AT 3 to 6 SECONDS PER SQ.IN.—ECONOMICALLY

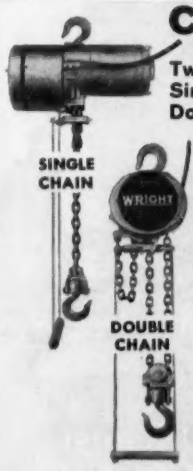
- New abrasive cutting machine—less than $500
- Wheel oscillation provides capacity up to 2" square solids, 3½" O. D. pipe and tubing, 3" angle iron, 4" channels
- Clean cuts on large or small sections
- Cuts cold rolled, stainless, and alloyed steel; cast iron; non-ferrous metals
- Little or no set-up time required
- Just two wheels for all SEVER-ALL cutting jobs
- Available from distributors

Write FOR BULLETIN DH-106

SEVER-ALL ABRASIVE CUTTING MACHINES ACCO
Allison-Campbell Division
American Chain & Cable Company, Inc.
930 Connecticut Avenue, Bridgeport 2, Conn.

▲ For more details circle NED-216 J9 on enclosed inquiry slip ▲

Light, Low-Cost Electric Chain Hoists



Two Capacities:
Single Chain—300 to 2000 lbs
Double Chain—3000 to 4000 lbs

The WRIGHT Electric Chain Hoist has fewer moving parts than any other chain-type electric hoist. Result: hoist working efficiency is increased, maintenance costs are decreased. This rugged, compact hoist features a double braking system—self-locking worm gear reduction, easy to adjust motor brake. Hoisting gears are made of high grade phosphor bronze—worms are heat treated alloy steel. All gears operate in a continual oil bath. Alloy load chain is wick lubricated for long life, heat treated for resistance to wear. Factory tested at 50% of overload.

Write to our York, Pa., office for Bulletin DH-73B

WRIGHT HOISTS
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-217 J9 on enclosed inquiry slip ▲

Jib Cranes for Any Requirement

WRIGHT Wall Bracket Jib Cranes are the perfect answer for supplementary use to a regular traveling crane or monorail track—or for individual use in bays, on sides of shops, etc. Hinge plates are fitted with Hyatt Roller Bearings or Bronze Bushings. These and all other fittings are made of annealed electric steel. Double tie rods connected to top and bottom fittings allow for "take-up" without use of turnbuckle. Note: mast not furnished. A complete line of WRIGHT pillar type jib cranes is available. If you like, jib crane fittings can be bought separately for local crane assembly.

Write our York, Pa., office for Bulletin DH-300

WRIGHT CRANES
Wright Hoist Division • American Chain & Cable Company, Inc. ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-218 J9 on enclosed inquiry slip ▲

Four stock sizes fit hook shanks ranging from ⅝ through 1¼ in. Latches for larger shanks available.

New Peerless SAFETY LATCH converts standard hooks to safety hooks in minutes

Make all hooks on your hoisting equipment safety hooks . . . convert them in minutes with simple tools and a Peerless Safety Latch. Made of sturdy corrosion-resistant materials and designed for long life.

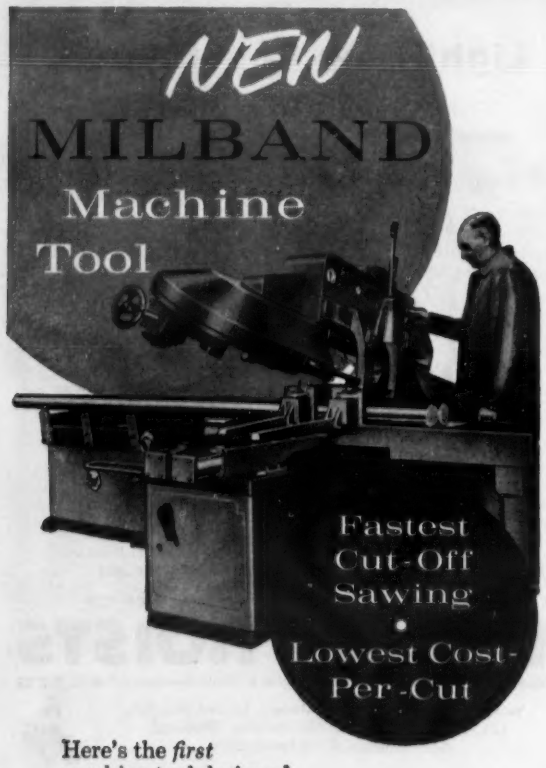
The latch installed costs less than machining a conventional safety hook, can be applied to any make of hook on any type of hoist or sling, has finger lugs to protect hoist operator.

Write us for full particulars

THE HARRINGTON COMPANY
Plymouth Meeting 16, Pa.

Hand Chain Hoists (¼ to 60 tons) • Electric Hoists (170 to 4000 lb.)
Trolley Hoists (¼ to 12 tons) • I-Beam Trolleys (¼ to 20 tons)

▲ For more details circle NED-222 J9 on enclosed inquiry slip ▲



Here's the *first* machine tool designed and built from the bottom up to provide the extra ruggedness and rigidity needed to handle high speed steel band blades with full efficiency. Cuts many times faster than other cut-off methods.

Cuts *consistently* straighter, smoother, more accurately and to closer tolerances. Fully automatic operation gives you more pieces per man-machine hour.

Narrower kerf with less chip loss means big savings in material.

GET THE COMPLETE TIME-AND MONEY-SAVING FACTS NOW . . . *write today for your free copy of Circular No. 501-58, containing full data on the new Milband Machine Tool.*

Saw Blade Specialists for Over 80 Years

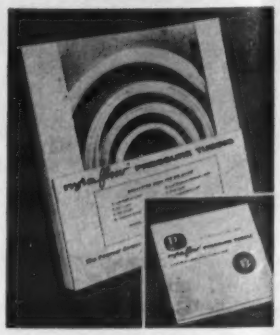
THE HENRY G. THOMPSON & SON CO.

MILFORD · BACK SAW & BAND SAW BLADES · HOT SAWS · GROUND FLAT STOCK

276 CHAPEL STREET,
NEW HAVEN 5, CONNECTICUT

▲ For more details circle NED-223 J9 on enclosed inquiry slip ▲

NYLON PRESSURE TUBING trial kit has ⅛ to ⅜ in. sizes



Trial or maintenance kit of Nylaflow nylon pressure tubing contains 20 ft each of ⅛, 3/16, ¼, and ⅜ in. OD tubing, with instruction and data booklet. Tubing is presently used for hydraulic, lubrication, pneumatic, oil and fuel, chemical, and beverage lines. It is available in burst strength ratings of 1000 and 2500 psi. Based on safety factor of 4 to 1, maximum operating pressures are 250 and 621 psi, respectively. Made by **Polymer Corp. of Pa.**, 2140 Fairmont Ave., Reading, Pa.

▲ For more details circle NED-224 J9 on enclosed inquiry slip ▲

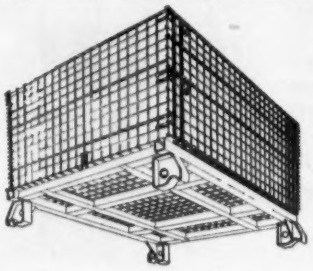
PNEUMATIC VIBRATOR TABLE 25 x 28-in. table is 6 in. high

Changing the air pressure changes the vibration frequency of Model RV2 pneumatic vibrator table used in chemical and food processing, packaging, and scale removal. Model shown has a 25 x 28-in. table with over-all height of 6 in. Unit incorporates an automatic lubricator, pressure regulator with gage, and knee, foot, or hand lever valve. Made by **National Air Vibrator Co.**, 435 Literary Rd., Cleveland 13, Ohio.

▲ For more details circle NED-225 J9 on enclosed inquiry slip ▲

WELDED WIRE CONTAINER in 500 to 6000-lb capacities

Welded wire fabric Cargotainers in the Clearview design are self-cleaning, collapsible, and firm stacking. Capacities range from 500 to 6000 lb. Base section has been engineered to accommodate the minimum 30-in. length of lift truck forks, while affording four and eight-way entry. It can also be handled by pallet and platform trucks. Wire fabric is cold-drawn 2-gage steel wire with welded intersections forming a 2-in. mesh. Made by **Tri-State Engineering Co.**, 325 W. Beau St., Washington, Pa.



▲ For more details circle NED-226 J9 on enclosed inquiry slip ▲

SAVE 60 to 70% of your short run label costs!

Now you can print your own labels — when you need them — as you need them . . . one at a time or 6600 per hour. Circles, squares or rectangles — each is printed and die-cut in perfect register. Low-cost plates can be made by any rubber stamp supplier. Completely automatic. Accurate counter is pre-set and stops machine when run is completed. Easy to operate; anyone can learn in ten minutes. Label stock is available in white plus 4 colors, gold and silver foil — in widths up to 2½ inches. Acetate film, acetate cloth, glass cloth, vinyl stock on special order.

Attractive lease plan or direct purchase — 100% service guarantee. Contact your nearest Brady Sales Office. Specification sheet 535 gives full details.

W.H. BRADY CO. 736 W. Glendale Avenue, Milwaukee 9, Wis.

Manufacturers of: Quality Pressure-Sensitive Tape Products, Self-Bonding Nameplates, Automatic Machines for Dispensing Labels, Nameplates, Masks and Tape. — Est. 1914. 86

▲ For more details circle NED-227 J9 on enclosed inquiry slip ▲

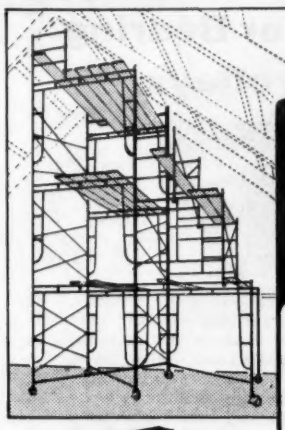
GEAR PROBLEMS? *Check with-* FAIRFIELD!

If you use gears in the product you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of accurate, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities. Your inquiry will receive prompt attention.

FAIRFIELD
Manufacturing Co.
2335 S. Concord Road
LAFAYETTE, INDIANA

▲ For more details circle NED-228 J9 on enclosed inquiry slip ▲

SAVE WITH SAFETY



BIL-JAX ROLLING SCAFFOLDS

Use standard scaffold parts for lots of combinations . . . to go up high for ceilings . . . straight out for long, low platform . . . for inside or outdoors work. Safe, easy to set-up and take down . . . speeds the job. Rental and sales outlets in principal cities.

Write for NEW 24-page catalog.

GETS YOU UP IN THE WORLD · BIL-JAX INC. Archbold, Ohio

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JET-LIFT

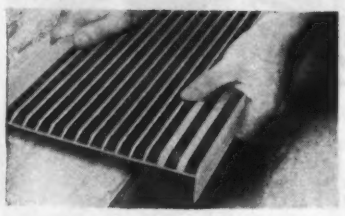
PORTABLE MANEUVERABLE-VERSATILE-COMPACT

The JETROW HEAVY DUTY HYDRAULIC JET-LIFT saves man power by cutting handling costs. It provides an easy method of lifting loads to correct working heights, has three lifting speeds, fingertip lowering control. Can easily be adapted to specialized requirements. Cost is surprisingly low. Specifications are: Lifting range 9″ to 53″; overall size: lowered position height—26″, width—28½″, length—59″; lift platform—28″ x 36″; wheels—8″ dia. Available in 2000 and 3000 lb. capacities.

THE JETROW CO., BRIDGEPORT, OHIO

▲ For more details circle NED-230 J9 on enclosed inquiry slip ▲

NEW SAFETY TREAD



Super - Stairmaster is the new heavy duty aluminum safety stair tread that repairs and modernizes worn or slippery stairs now available from Wooster Products Inc., Wooster, Ohio.

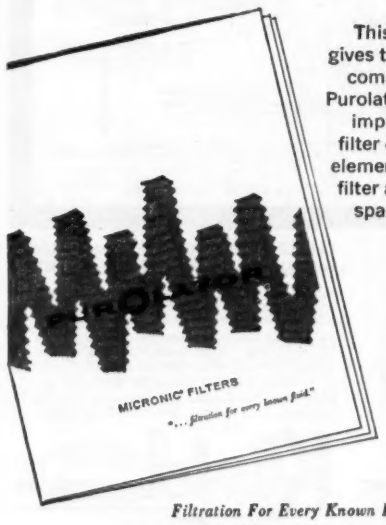
The new abrasive "TRAFFIC-FLOW" design of the Super-Stairmaster has a magnetic-like grip which provides safe, sure traction on commercial-industrial-institutional stairs and is 100% effective under dangerous wet or oily conditions. Perfect safety for ladies' high heels is a feature of interest to managers of buildings open to the public. The treads are rugged and outwear concrete, stone or marble. Easily applied over all types of stairs. Cleans with once-over-sweeping or vacuum.

Approved and recommended by Safety Engineers. Guaranteed by Warranty Bond.

Complete information on Super-Stairmaster and the repair of stairs by return mail. Write Stairmaster, Dept. S-16, **Wooster Products Inc.**, 100 Spruce St., Wooster, Ohio. *(Advt.)*

▲ For more details circle **NED-231 J9** on enclosed inquiry slip ▲

New design information on Purolator Micronic® filters



This new, free bulletin gives the design engineer complete basic data on Purolator's phenolic resin impregnated, cellulose filter elements. Micronic elements pack maximum filter area into minimum space (up to ten times more than other types); do not channel; are waterproof and warp-proof; have rigidly controlled porosity.

For your copy, write to Dept. MCI-97.

Filtration For Every Known Fluid

PUROLATOR PRODUCTS, INC.
RAHWAY, NEW JERSEY AND TORONTO, CANADA

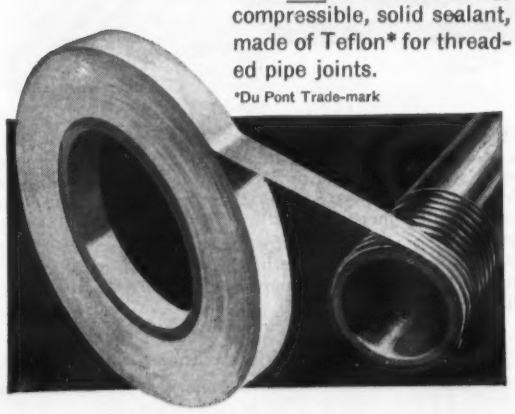
▲ For more details circle **NED-232 J9** on enclosed inquiry slip ▲

• whatever the threaded joint . . . •

NEW **PERMACEL®** RIBBON DOPE
TRADE-MARK
THREAD SEALANT

The only self-lubricating, compressible, solid sealant, made of Teflon* for threaded pipe joints.

*Du Pont Trade-mark



PERMACEL *New Brunswick, N.J.*

TAPES • ELECTRICAL INSULATING MATERIALS • ADHESIVES

▲ For more details circle **NED-233 J9** on enclosed inquiry slip ▲

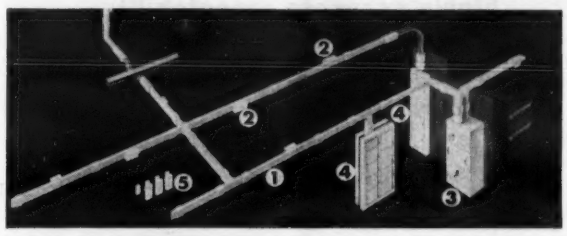
METAL PROPERTIES TESTER
checks heat treatment, hardness

Both ferrous and nonferrous metal parts are quickly tested for heat treatment condition, relative hardness and strength, chemical purity, and presence of decarburization with the portable, battery operated Heatcheck meter. Measurements are made on any flat 5/8-in. diameter or larger surface, even through dirt or layers of paint. Probe touched to surface radiates an electromagnetic field which excites eddy currents in the test part. Response to conductivity and permeability is displayed on a meter and by two alarm lights. Various plug-in meter scales are available for different metals and conductivity ranges. Leather carrying case is supplied. Made by **Metrol, Inc.**, 17 E. Holly, Pasadena, Calif.

▲ For more details circle **NED-234 J9** on enclosed inquiry slip ▲

POWER DISTRIBUTION SYSTEM
live part cannot be touched anywhere in totally safe system

Safety slide and retractable plug-in contact operation makes it impossible to touch a live part anywhere in the Uni-Bus Masterguard electrical distribution system.



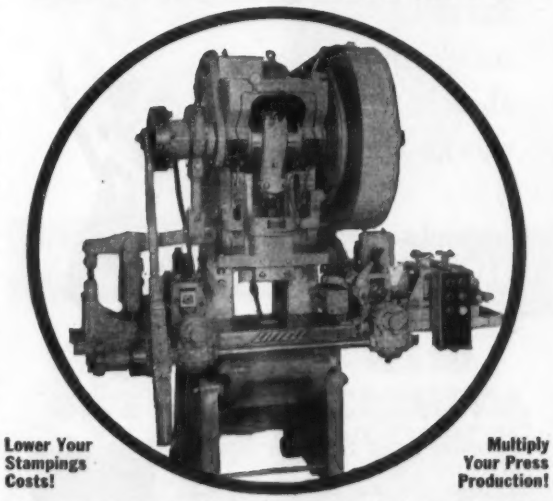
Total safety is carried throughout the system down to the working level in motor control centers, switchboards, motor starters, and enclosed switches.

All components of the busways' system have common electrical ratings and physical dimensions for flexibility in planning. Outlets are universal. Standardized Uni-Bus subdistribution centers receive a variety of plug-in units. Typical installation shown includes the Uni-Bus busway (1), plug-in devices (2), service entrance equipment (3), Uni-Bus centers (4), and safety switches, circuit breakers, and motor control (5).

Busways have one standard housing dimension for ratings from 250 to 1000 amp, 600 v in both feeder and plug-in types. In from 1350 to 4000-amp capacities, Uni-Bus is furnished as factory assemblies of standard, matched-impedance, lower ampere-rated units in single or multiple enclosures. Made by **Electric Distribution Products, Inc.**, 2200 31st St. S.W., Allentown, Pa.

▲ For more details circle **NED-235 J9** on enclosed inquiry slip ▲

LITTELL ROLL FEEDS



Lower Your Stampings Costs! **Multiply Your Press Production!**

Littell engineered to fit readily on standard straight sided and OBI Presses. Feed thick or thin stock up to 72" wide at the speeds required for new efficiency and economy in your stampings production.

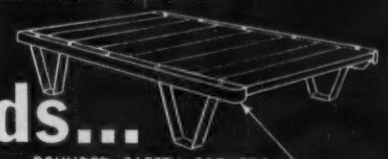
F. J. LITTELL MACHINE CO. — SERVING USERS OF COIL STOCK — Branches: Detroit Cleveland

Write for Catalog "A"

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle **NED-236 J9** on enclosed inquiry slip ▲

Ironbound Skids...



"Short-Haul" Skids

BOUND TO BE BETTER Ironbound MATERIALS HANDLING EQUIPMENT

Write for Illustrated Catalog

IRONBOUND BOX & LUMBER COMPANY
55 HOFFMAN PLACE, HILLSIDE, N. J.

▲ For more details circle **NED-237 J9** on enclosed inquiry slip ▲

8812-MR

5 WAYS TO CUT SOLID TIRE REPLACEMENT COSTS...

and increase lift truck performance

1 GET THE RIGHT TIRE FOR THE JOB
For efficiency and economy, always specify solids according to vehicle, loads and normal operating conditions.

2 AVOID STANDING LOADS AND OVERLOADS
Flat spots cause severe vibration and separation of rubber tire from rim. Overloads result in rapid wear.

3 KEEP FLOORS CLEAR OF DEBRIS
Clean traffic lanes mean savings . . . cuts and bruises from scrap are a major cause of premature tire failure.

4 INSPECT TIRES DAILY
Frequent inspection and prompt removal of imbedded objects costs less than frequent tire replacement.

5 SWITCH TO MONARCH SOLIDS

Made from Compound T-48C, the toughest *natural rubber* stock developed to date, MONARCH industrial solids give superior performance . . . more ton-miles per dollar invested.

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO

• 7-255 General Motors Bldg., Detroit
• 2353 N. California Ave., Chicago
• Warehouse: Reno, Nevada

▲ For more details circle **NED-238 J9** on enclosed inquiry slip ▲

SOLVE "TOUGH" PARTS PROBLEMS WITH Colonial's SILICONE RUBBER

There's practically no end to the usefulness of silicone rubber as a material for making rubber parts. It won't melt or harden at 700 deg. F., won't conduct electricity, is not affected by sun, water or weather, and even dry ice can't freeze it. These and many other desirable properties which can be obtained through Colonial's expert compounding, make silicone rubber the most likely material for solving your "tough" parts problems.

Whether you are designing new products, or improving existing ones, contact Colonial Rubber Company for details on the advantages of fabricating more efficiently and *profitably* with silicone rubber. Our service is complete . . . you can call on us for any one or all three of the following:

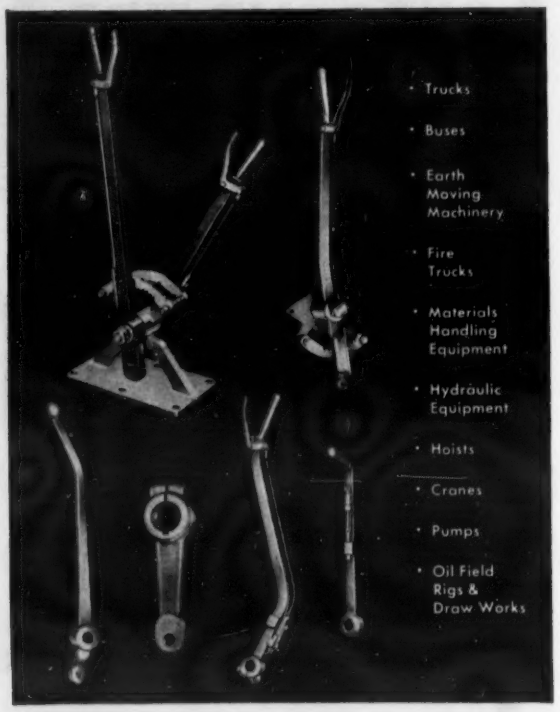
EXPERT COMPOUNDING
ACCURATE PRODUCTION
QUICK DELIVERY

1967-1

COLONIAL RUBBER CO.
RAVENNA, OHIO

▲ For more details circle NED-239 J9 on enclosed inquiry slip ▲

BATAVIA LEVERS
for machines and vehicles



standard, stocked forgings eliminate tooling costs

NO "SPECIAL" ENGINEERING: Chances are there's a Batavia lever design that's either ready-made for your requirements or can be easily modified to fit the need.

NO "SPECIAL" FABRICATION: Batavia has developed *and stocks* an extensive line of standard handle and lower-half assembly forgings, hubs, sub-levers and extensions which can be combined to produce the lever desired. Brake, clutch, P.T.O. and short linkage levers can usually be furnished to meet specifications without tooling charges.

FOOT LEVERS AND CONTROL UNITS, TOO: Batavia also manufactures a wide variety of pedals as well as a line of 4-speed winch and transmission controls.

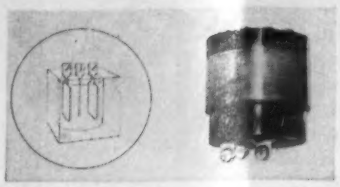
SEND SKETCH for experimental lever sample or mail the coupon below for literature.

BATAVIA METAL PRODUCTS CORP.
Batavia, New York
Mail your illustrated Lever Bulletin to us, without obligation.

NAME TITLE
COMPANY
ADDRESS
CITY ZONE STATE
NE

▲ For more details circle NED-240 J9 on enclosed inquiry slip ▲

STATIC SWITCHING DEVICE
functions continuously without wear on loads up to 15 amp and 70 v ac

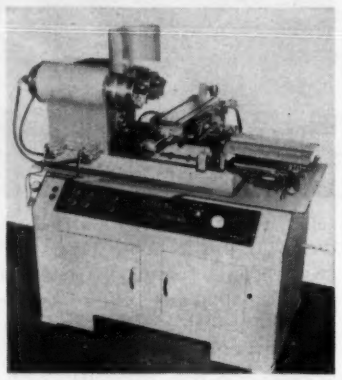


Almost any amount of alternating current can be switched and modulated continuously by the Ovitron, an encapsulated static switching device that operates without wear. Uses range from proximity controls and logic devices to regulators and time delays. It consists of two load-connected electrodes and a grid control element, all immersed in an electrolytic bath. It is unaffected by vibration, shock, moisture, and position. High wattage load current is controlled entirely by application of a small energy stimulus, and in a manner which permits either full on, full off, or modulation.

Single cells have 3-v ac minimum and 70-v ac maximum load voltage, and milliampere to 15-amp load current ratings. Multiple cell units permit higher ratings. Current rating is varied by increasing or decreasing the size of the unit and the electrode surface area. Ratio of control to load current can be varied from 10:1 to 50:1 or higher. Made by **Ovitron Corp.**, 14830 Schaefer Highway, Detroit 27, Mich.

▲ For more details circle NED-241 J9 on enclosed inquiry slip ▲

BORING MACHINE
finishes blank in one cycle with highly accurate repeatability



While the front of the workpiece is being finished on one spindle, the reverse side is machined on the second spindle of the Boreking twin-spindle, automatic cycling boring, turning, and facing machine. A complete finishing operation is performed in one cycle. Machine can be set for any combination of feeds with fast approaches and returns where applicable. Main table slides on two round, hardened, and ground ways, protected by boots.

Head and bed are lapped to a flatness of 0.00005 in. and rest on a rubber cushion. Machine repeats to a tolerance of less than 0.0002 in. on a face cut and 0.00005 in. on a bore. Spindle speeds are infinitely variable between 400 and 4000 rpm, and can be set independently for each spindle. Drive is from a single ¾-hp motor with variable speed drive. Available from **Russell, Holbrook & Henderson, Inc.**, 292 Madison Ave., New York 17, N. Y.

▲ For more details circle NED-242 J9 on enclosed inquiry slip ▲

Jiffy's durable cushioning absorbs shocks & impacts

JIFFY PADDED SHIPPING BAGS CAN TAKE IT! The resilient cushioning returns gently after each impact—never flattens out.

The outer liner of all standard Jiffy Bags is made of 70 lb. CLUPAK paper, the kraft with built-in stretch. Its extra toughness makes Jiffy Bags twice as strong as bags made with ordinary kraft.

Test the very best.
Write today for your free samples.

Jiffy MANUFACTURING COMPANY
HILLSIDE NEW JERSEY

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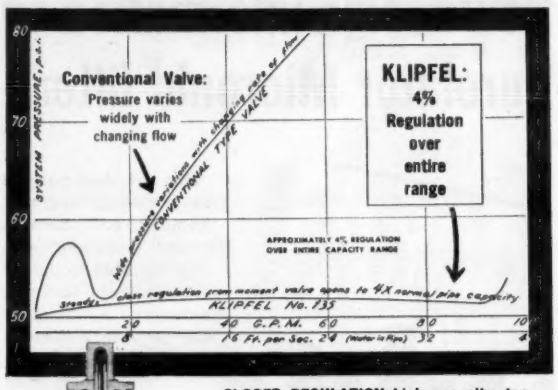
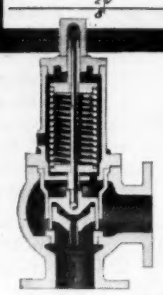
USE THE Nissen BALL POINT WRITING TUBE
make permanent marks on metal wood plastic glass

This ball point marker saves considerable time in marking, numbering or coding products made of wood, metal, plastic and glass. It is widely used because:
• tube with ball point makes application easy on rough or smooth surfaces • special, fast drying opaque ink withstands heat and weathering • marks will not chip, peel, fade or rub off • 7 different colors are available • 3 different size ball points make fine or broad lines

Write, wire or call for a trial order
JOHN P. NISSEN, JR. Co., manufacturers
GLENSIDE, PENNSYLVANIA • CALL TUrner 4-4664

▲ For more details circle NED-244 J9 on enclosed inquiry slip ▲





CLOSER REGULATION high capacity, too with KLIPFEL BACK PRESSURE VALVES

Klipfel No. 135 Back Pressure Valves are ideal for original equipment installations and are used with any clean fluids for pressures from 5 to 300 lbs.

Klipfel Cup Disc Valves provide excellent regulation at all rates of flow. Upstream pressure rise is a fraction of that with conventional valves. Capacity is 4 times that of a pipe of the same size.

FREE: Write for Bulletin 454 containing complete information on Klipfel Back Pressure Valves.

HAMILTON • OHIO Klipfel VALVES, INC.

Automatic Temperature-and-Pressure-Regulating Valves Since 1902

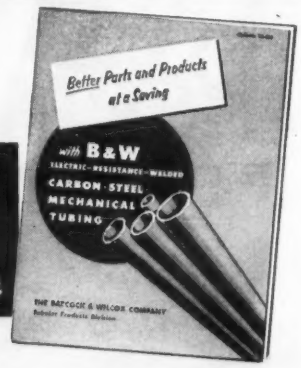
Float Valves • Temperature Regulators • Back Pressure Valves • Reducing Valves

A DIVISION OF THE HAMILTON-THOMAS CORPORATION

▲ For more details circle NED-245 J9 on enclosed inquiry slip ▲

It Will Pay You to Write for this

B&W Bulletin on Mechanical Tubing



Here's a fact-packed 8-page bulletin that details HOW and WHY you save when you use this superior carbon steel tubing. It contains informative tables on Analyses; Mechanical Properties; Size, Gage, and Cut-Length Tolerances; and a check-list of tips to save you time in ordering. This bulletin should be part of your reference library. For your copy of Bulletin TB-419, just write to The Babcock & Wilcox Company, Tubular Products Division, Beaver Falls, Pa.

TA-9015-WML 2

B&W THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION

Seamless and welded tubular products, solid extrusions, seamless welding fittings and forged steel flanges—in carbon, alloy and stainless steels and special metals.

▲ For more details circle NED-246 J9 on enclosed inquiry slip ▲

LYON® SHOP DESKS

BOTH STANDING AND CABINET TYPES

Standing type (shown) provides writing surface, storage space and drawer with lock.

Bottom shelf adjustable. Cabinet type has same top and drawer plus lock-up storage cabinet below.

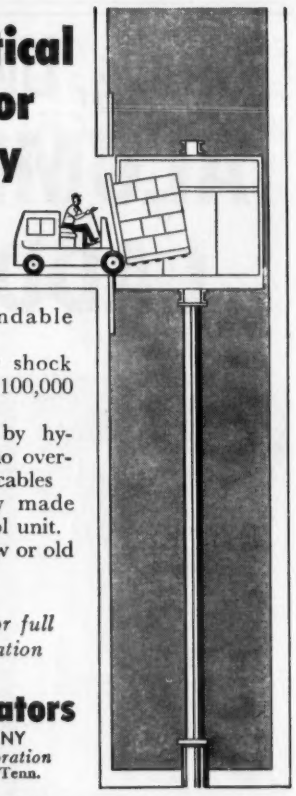
Durably built of steel, finished in green baked on enamel.

Write for free 84-page Lyon Steel Equipment Cabinet.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle NED-247 J9 on enclosed inquiry slip ▲

Most practical elevator for heavy-duty service



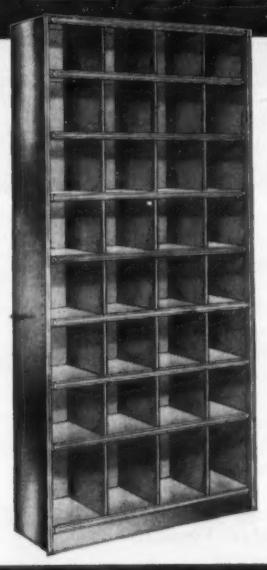
- Economical, dependable hydraulic operation
- Ruggedly built for shock loading . . . 1000 to 100,000 lb. capacities
- Elevator supported by hydraulic system . . . no overhead machinery, no cables
- Adjustments quickly made on one central control unit.
- Easily installed in new or old buildings

Rotary *Write for full information*

Oildraulic® Elevators
ROTARY LIFT COMPANY
Division of Dover Corporation
1024 Kentucky, Memphis 2, Tenn.
Chatham, Ontario

▲ For more details circle NED-248 J9 on enclosed inquiry slip ▲

LYON® BIN UNITS



SHIPPED SET UP . . . READY FOR USE

Use these sturdy steel bins wherever there are parts or small bulk or packaged items to be stored or displayed.

Steel bins are 3′ wide, 1′ deep, 6½′ high. Shelves are adjustable up and down every 1½″. Dividers adjustable horizontally every inch. Finished in durable green baked-on enamel. Available in a variety of bin arrangements to accommodate small, large or long items.

Write for free 84-page Steel Equipment Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

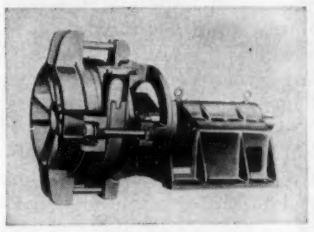
▲ For more details circle NED-249 J9 on enclosed inquiry slip ▲

MAGNETIC STIRRER-HOTPLATE
speed, temperature are adjustable

Functions of a laboratory hotplate and a magnetic stirrer are combined in this Cenco unit. It can be used independently for stirring or heating, or simultaneously for both operations. Low, medium, or high temperatures are controlled by an adjustable thermostat, and slow, medium, or fast speeds are selected with a rheostat. Both controls have pilots to show "on" positions. Two magnetic stirring rods are supplied. Unit operates on 115-v ac and draws up to 600 w. Made by **Central Scientific Co.**, 1700 Irving Park Rd., Chicago 13, Ill.

▲ For more details circle NED-250 J9 on enclosed inquiry slip ▲

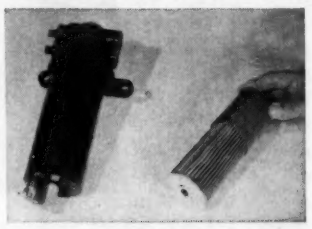
SLURRY PUMP
now made in 2 to 6-in. sizes



Abrasive slurries of cement, sand, coal, solids, chemical sludges, and plant wastes are handled readily with this Model 6RXW slurry pump. Maintenance is facilitated by four-bolt design for access to wearing parts without disturbing piping. Rotating element is adjustable to compensate for wear, and liners on both sides of the impeller are replaceable. Suction and discharge nozzles swivel to suit any installation. Made by **Morris Machine Works**, 20 E. Genesee St., Baldwinsville, N. Y.

▲ For more details circle NED-251 J9 on enclosed inquiry slip ▲

AIR LINE FILTER
removes water, oil, and dirt



Filter element of the No. 571000 air line filter is a pleated, phenolic resin impregnated cellulose cylinder with a deflector baffle around the top. The Micropleat element is rated at 10 microns for removing dirt, water, and oil with minimum pressure increase. Filter itself consists of aluminum head which houses inlet and outlet ports, chemically coated aluminum bowl with drain cock, and the element. Four ¼-in. pipe threaded ports, two inlet and two outlet, permit versatile mounting. Over-all length is 9⅞ in. Made by **Bendix Aviation Corp.**, Bendix Filter Div., 434 W. 12 Mile Rd., Madison Heights, Mich.

▲ For more details circle NED-252 J9 on enclosed inquiry slip ▲

IT'S TAPER-LOCK! IT'S ALL STEEL!

FULL-DEPTH WELD GIVES 100% STRENGTH

Modern! Superior! Taper-Lock Steel Conveyor Pulleys have terrific impact capability. All welds are made by the submerged arc process for 100% strength. Taper-Lock's back-up bar (pat. applied for) permits a weld of full rim thickness. Diameters 6 inches to 8 feet, all face widths. Popular sizes stocked by Dodge Distributors. Write us for data.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE *of Mishawaka, Ind.*

▲ For more details circle NED-253 J9 on enclosed inquiry slip ▲

LYON® STEEL SHELVING

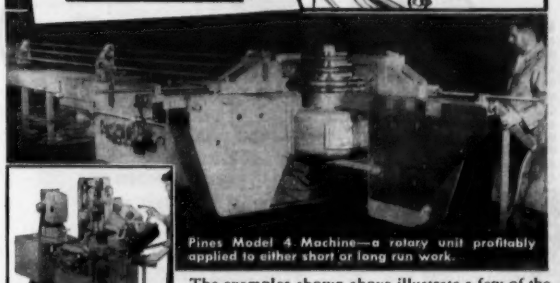
Patented Clip and Stud design provides lowest cost and quickest assembly plus complete adjustability without the use of bolts, nuts or tools.

Write for free 84-page Lyon Steel Equipment Catalog

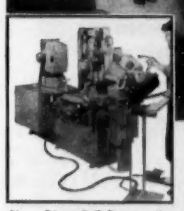
LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle NED-254 J9 on enclosed inquiry slip ▲

FOR THE LATEST
Cost-Cutting Methods
INVESTIGATE
COLD BENDING "The PINES-Way"



Pines Model 4 Machine—a rotary unit profitably applied to either short or long run work.



New Pines 3-T Progressive Bending Press makes quality bends in stock up to 1" O.D. at 2 to 3 times faster than ordinary machines. Larger units available.

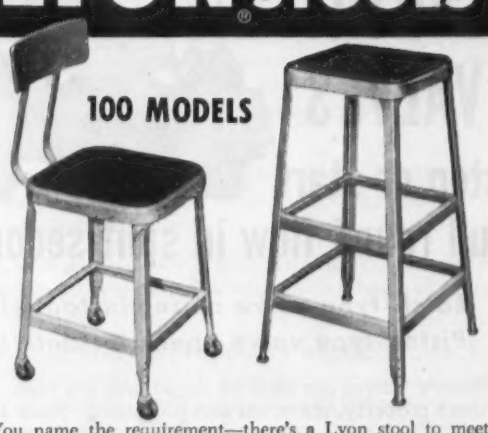
The examples shown above illustrate a few of the many different jobs which are today more profitably produced on Pines Bending Machines or Bending Presses. New Machines and tooling techniques developed over the years are now effecting substantial savings in production costs. If your products require the cold forming of round, square, rectangular, extruded, or hollow stock to one or more different angles, it will pay you to investigate cold bending the "Pines-Way." Write today for more facts or assistance without obligation on any specific job.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 639 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

Free **DATA SHEETS** For latest data on new bending methods, write for issues of Pines News.

▲ For more details circle NED-255 J9 on enclosed inquiry slip ▲

LYON® STEEL STOOLS



100 MODELS

You name the requirement—there's a Lyon stool to meet it. With or without backs—ventilated steel or pressed wood seats—glide, swivel caster or rubber-cushioned feet. Adjustable legs if desired. All stools built of heavy-duty steel, all-welded construction. Finished in green baked-on enamel.

Write for free 84-page Lyon Steel Equipment Catalog

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Illinois and York, Pa.
Dealers and Branches in all Principal Cities

▲ For more details circle NED-256 J9 on enclosed inquiry slip ▲

VIBROLATOR®

VIBRATION INDUCERS

"WORLD'S QUIETEST VIBRATOR"

MOVES, SIFTS, COMPACTS MATERIALS

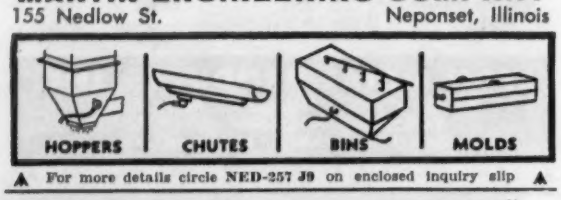
This vibration inducer has only one moving part — a rolling ball. Works perfectly on wet or dirty air. Needs no lubricator. Guaranteed self-starting always. Operates continuously in very hot locations. Absolutely spark-free for hazardous jobs.

The "Vibrolator*" vibrator moves material out of hoppers, down chutes and through screens. Compacts concrete in forms or granulars in boxes or drums.

"Vibrolator" vibrators are available in a wide range of sizes "pocket watch" to the most powerful hand-portable unit built. *Call your distributor or write for free catalog.*

*"Vibrolator" is Martin Engineering's registered trade mark for its vibration inducers and vibration accessories.

MARTIN ENGINEERING COMPANY
155 Nedlow St. Neponset, Illinois



▲ For more details circle NED-257 J9 on enclosed inquiry slip ▲

SOUTHWEST

"Monoball"®

SELF-ALIGNING BEARINGS

CHARACTERISTICS

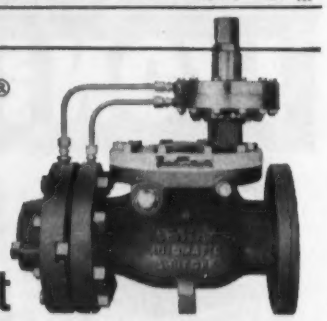
ANALYSIS	RECOMMENDED USE
1 Stainless Steel Ball and Race	For types operating under high temperature (800-1200 degrees F.).
2 Chrome Alloy Steel Ball and Race	For types operating under high radial ultimate loads (3000-893,000 lbs.).
3 Bronze Race and Chrome Steel Ball	For types operating under normal loads with minimum friction requirements.

Thousands in use. Backed by years of service life. Wide variety of Plain Types in bore sizes 3/16" to 6" Dia. Rod end types in similar size range with externally or internally threaded shanks. Our Engineers welcome an opportunity of studying individual requirements and prescribing a type or types which will serve under your demanding conditions. Southwest can design special types to fit individual specifications. As a result of thorough study of different operating conditions, various steel alloys have been used to meet specific needs. Write for Engineering Manual No. 551. Address Dept. NED59

SOUTHWEST PRODUCTS CO.
1705 SO. MOUNTAIN AVE., MONROVIA, CALIFORNIA

▲ For more details circle NED-258 J9 on enclosed inquiry slip ▲

SENTRY® VALVES



stop or start full round flow in split second

Latch-type valve closes instantly!
Piston-type valve opens instantly!

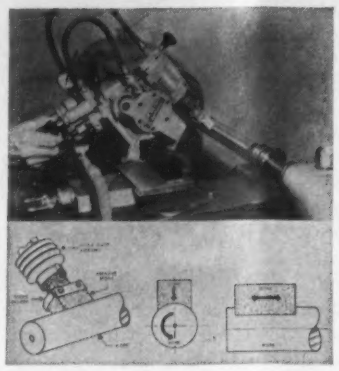
Sentry Valves are used on liquid and gas lines . . . protect property, materials and processing. Sizes 1½" to 8".

Have details on quick, positive action of this remarkable Coppus line at your fingertips. WRITE to COPPUS ENGINEERING CORPORATION, 409 Park Avenue, Worcester 10, Mass.

ANOTHER COPPUS "BLUE-RIBBON" PRODUCT

▲ For more details circle NED-259 J9 on enclosed inquiry slip ▲

MICROFINISHING PROCESS attachment mounts on machine tools to finish hard or soft materials

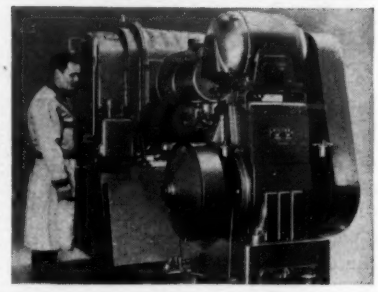


Adaptable to single-piece as well as production work, Microstoning surface finishing process generates a controlled microfinish on practically any material and corrects for geometrical errors resulting from previous machining operations. The Superfina attachment which performs this work is usually used on engine lathes, but it is also adaptable to turret lathes, boring mills, and other machine tools.

Attachment is mounted on the tool post, and a special abrasive stone is held under constant pressure against cylindrical work mounted between centers. The stone oscillates at a preselected amplitude in range of 2000 to 2500 per minute while fed along the work axis. Stone quickly conforms to shape of rotating workpiece, and uniform abrading action produces finishes to 0.5 microinches on hard materials and 1 to 2 microinches on soft metals. Some nonmetals have been successfully finished. Tool is air actuated and is offered in two sizes with strokes to 0.195 and 0.234 in. Stones for specific materials and finishes are offered. Developed in West Germany, this process and tool are licensed to and made by **Taft-Peirce Mfg. Co.**, Woonsocket, R. I.

▲ For more details circle NED-260 J9 on enclosed inquiry slip ▲

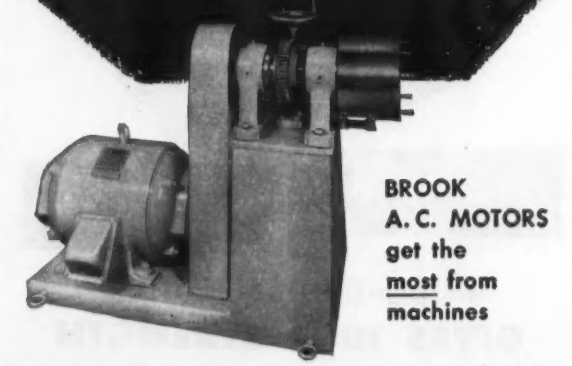
BOOSTER VACUUM PUMP has 10-micron to 1-mm pressure range



A high capacity Roots - type dry blower as the first stage, backed by a gas - ballasted rotary piston-type mechanical vacuum pump as the second stage makes up Stokes mechanical booster vacuum pumps. Units afford fast pumping speeds in the absolute pressure range from 10 microns to 1 mm and will thus handle large volume pumping loads economically. King-size Model 1713 shown stands 83¼ in. tall, occupies an area 103 in. by 67 in., and has a maximum displacement of 6370 cfm. Made by **F. J. Stokes Corp.**, Vacuum Equipment Div., 5500 Tabor Rd., Philadelphia 20, Pa.

▲ For more details circle NED-261 J9 on enclosed inquiry slip ▲

A GOOD MACHINE CALLS FOR A GOOD MOTOR!



BROOK A.C. MOTORS get the most from machines

Plenty of power when your machine is driven by Brook. Maintenance costs are low. No wonder, because there is no finer electric motor built. Yet, BROOK MOTORS COST LESS. They have proven themselves in factories, mills and mines, powering all types of machines, compressors, pumps, blowers and conveyors. Motor shown powers a pharmaceutical homogenizer. All standard enclosures. 1 to 600 H.P.

Warehouses, factory representatives and dealers coast-to-coast and in Hawaii. Send for literature.

world's most respected motor

BROOK MOTOR CORPORATION
3302 W. PETERSON AVE., CHICAGO 45, ILL.
In Canada: Brook Electric Motors of Canada, Ltd. 250 University Ave., Toronto, Ontario

Since 1904 BROOK MOTOR CORPORATION

▲ For more details circle NED-262 J9 on enclosed inquiry slip ▲

---

toughest scoops and shovels *made*

WOOD'S **Moly** BRAND

Mo-lyb-den-um alloy blades

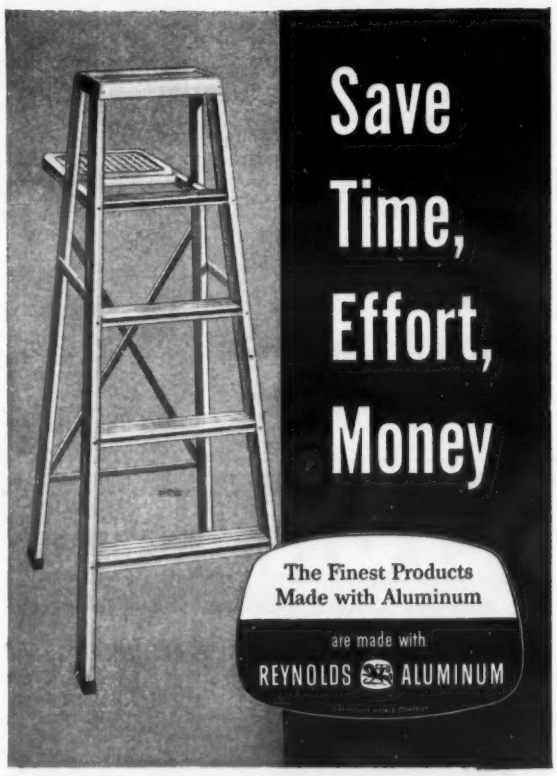
Pat. Steel I-Beam Prevents Handle Breakage

Workers like them for hang, balance, and perfect finish . . . and they last 2 to 3 times as long as other grades. Blades guaranteed uniform gauge, hardness, and tensile strength. Guaranteed not to split or crack. Guaranteed uniform quality 12 to the dozen. Cheapest shovels you can buy for long hard service, and workers take care of tools they like.

THE WOOD SHOVEL & TOOL CO.
Piqua, Ohio

▲ For more details circle NED-263 J9 on enclosed inquiry slip ▲

Strong, Lightweight ALUMINUM LADDERS



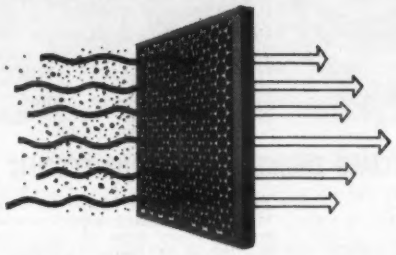
Aluminum ladders are easier, much easier, to move from job to job. This means savings in time and labor. And because they keep their shape, won't warp, twist or rot, aluminum ladders are safer—always keep their feet on the ground.

When purchasing ladders for use in your plant, remember their extra long life makes actual cost lower. For the names of leading ladder manufacturers who use strong, lightweight, rustproof Reynolds Aluminum, write *Reynolds Metals Company, P.O. Box 2346NO-9, Richmond 18, Virginia.*

Watch Reynolds TV shows
"ALL-STAR GOLF" and "ADVENTURES IN PARADISE"—ABC-TV

▲ For more details circle NED-264 J9 on enclosed inquiry slip ▲

New AAF "throwaway" carbon filter traps odors and dirt...



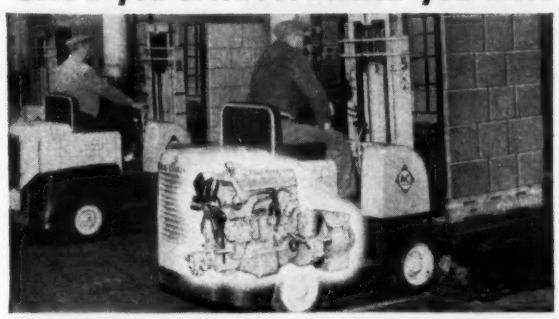
...permits recirculation of freshened air

Now you can re-circulate *pure, clean air*—without the forbidding cost of most odor filters! Combines high odor removal and retention, high air-cleaning efficiency, low resistance to air flow. Average life, two months—then throw it away and put in another low-cost unit. No big initial investment, no maintenance, no reactivation. Shipped in vapor-proof container for long storage. Write for Bulletin 220. 391 Central Avenue, Louisville, Ky.

American Air Filter
BETTER AIR IS OUR BUSINESS

▲ For more details circle NED-265 J9 on enclosed inquiry slip ▲

It's a fact... heavy-duty engines in ALLIS-CHALMERS lift trucks SAVE you more...MAKE you more



Heavy-duty industrial engines in Allis-Chalmers lift trucks stand alone in their ability to take tough work for long periods. The fact that they are the most rugged used in lift trucks means thousands of extra work hours, minimum maintenance, more years of service. The fact that they deliver more usable horsepower means they do extra work every hour — maneuver faster, climb steeper grades.

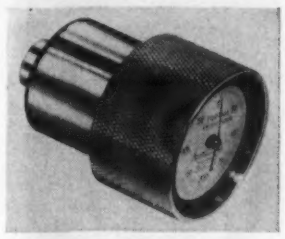
Put an Allis-Chalmers lift truck to work and you will see many advantages of its heavy-duty engine *immediately*. But it will take years to reveal *all* the benefits. Let your dealer give you more facts — and a demonstration. Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS

BH-122

▲ For more details circle NED-266 J9 on enclosed inquiry slip ▲

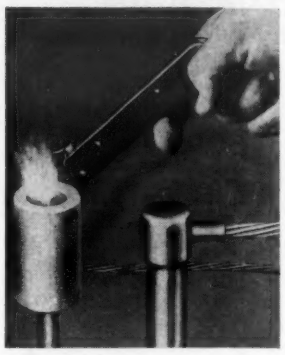
TORQUE INDICATOR
four direct-reading ranges offered



Permanent calibration, limiting stop to prevent damage, and a wide range of easily applied adapters are features of this compact bi-directional reading torque indicator. The direct-reading instrument is offered in four basic ranges of 1-15, 2-50, 2-150, and 2-200 oz-in. Readings accurate to within 2 per cent are indicated on the easy-to-read satin finish aluminum dial. Made by **Autotronics Inc.**, Dept. 21, Box 208, Florissant, Mo.

▲ For more details circle NED-268 J9 on enclosed inquiry slip ▲

SELF-MOLDING CONNECTOR
uses copper thermit principle



Cable-to-ground rod electric connections can be made by the One Shot mold which uses the Cadweld copper thermit process. The disposable ceramic mold replaces the semipermanent graphite mold and handle clamp. Cadweld powder cartridge, metal disc, wrap seal, and a ferruled sleeve are included with the packaged unit, available for certain cable and ground rod sizes. Resulting connections have the full current carrying capacity of the conductors. The 1¾ x 3-in. mold accommodates ⅝-in. rod to No. 4 wire and smaller. Made by **Erico Products, Inc.**, 2070 E. 61st Place, Cleveland 3, Ohio.

▲ For more details circle NED-269 J9 on enclosed inquiry slip ▲

55-GAL PLASTIC DRUM & LID
molded of white polyethylene

Weighing only 10¼ lb, this injection molded plastic 55-gal drum has an inside diameter of 24 in. and stands 31 in. high. Together with its tight-fitting, splashproof lid, it is made of white polyethylene and is closed securely with a steel closure ring. Drum is easily cleaned, resists acids and chemicals, and is nontoxic and dentproof. It also nests for shipping or storage. Offered by **Redmanson Corp.**, 630 Loucks Mill Rd., York, Pa.

▲ For more details circle NED-270 J9 on enclosed inquiry slip ▲

From rough cut . . . to precision beading . . .

there's extra value in a Black & Decker® tool!

Pick your operation—shaping, routing, drilling, running screws or nuts, sawing, planing, sanding—even trimming laminate: there's a Black & Decker tool packed with extra performance features to speed your woodworking jobs. Call your local B&D distributor for a demonstration today.

Look Under TOOLS-ELECTRIC for Sales or Service

▲ For more details circle NED-267 J9 on enclosed inquiry slip ▲

Dillon Force Gauge

MEASURES TENSILE OR COMPRESSION LOADS

- Accurate to within 1% of full scale capacity.
- Jewelled dial indicator repeats perfectly.
- Shockless mechanism for rough jobs.
- Red maximum pointer registers peak loads.
- Optional switch controls mechanisms.
- Accommodates wide variety of attachments.
- Available as combination push-pull model.
- Extremely compact. Fits into "tight" spaces.
- Flexes millions of cycles without damage.

WRITE FOR FREE ILLUSTRATED CATALOG AND PRICE LIST

12 different capacities from as low as 0-10 lbs. up to as high as 0-50,000 lbs.

W.C. Dillon & CO., INC. 14578NE Keswick St. Van Nuys 1, Calif.

▲ For more details circle NED-271 J9 on enclosed inquiry slip ▲

CUT HANDLING COSTS - - - STOCK MORE IN LESS SPACE

LOW-COST, STACKBIN-IN-STACKRACK UNITS PAY FOR THEMSELVES IN 3 WAYS

SAVE SPACE — Individual units stack easily and lock securely as high and as long as you need. Seven different size units available.

SPEED PRODUCTION — Stackbins reduce handling time. Can be used intra-plant in processing, sub-assembly, assembly and stockroom. Roller Bearing Slide Stackracks available for heavier contents. Locking Pallets supplied for unit load handling.

REDUCE INVENTORY TIME — Accessibility of Stackbins for weight count speeds inventory taking; visibility of contents simplifies control.

STACKBIN-IN-STACKRACK COMBINATIONS are made of heavy gauge steel with all welded construction and baked enamel finish.

LOW-COST STACKBIN PRODUCTS ARE SOLD DIRECT — A factory trained, Stackbin Sales Engineer will study your plant requirements, at no obligation, and will make specific recommendations for handling and storage efficiency. Buy only as many units as you need.

WRITE TODAY FOR FULL INFORMATION

STACKBIN CORP. 1081 Main St., Pawtucket, R. I.

Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., "Perth"

STACKBIN SYSTEM "Stacked and Still Accessible"

▲ For more details circle NED-272 J9 on enclosed inquiry slip ▲

RUGGED McGILL® portable lampguards last longer

McGill portable lampguards are designed and built specifically to take the punishment of industrial use. Their use avoids frequent and costly replacement. Extra heavy cages are electrically welded and zinc-plated with chromate finish. Choice of handles include neoprene-butyl, wood and impact resistant molded phenolic. With LEVOLIER switches and 660 watt 250 volt sockets, McGill portables offer much more service for little more in price.

No. 7100-SR Gray neoprene-butyl handle, reflector. No Rol cage switch. Thumb clamp allows quick lamp changing without tools.

Available from your Electrical wholesaler

Write for McGILL catalog No. 84

engineered electrical products — McGILL® — precision needle roller bearings

McGILL MFG. CO., INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle NED-271 J9 on enclosed inquiry slip ▲

Here's data on the *New*

DIAL HEAD AGASTAT®

time/delay/relays

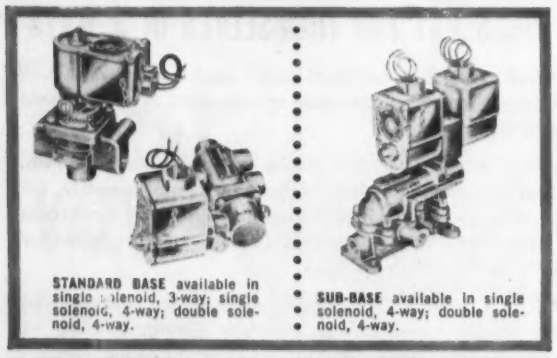
These relays have recently been re-designed—improved in performance *and* appearance. So you'll want up-to-date specs.

This free folder gives complete details on all models. In it you'll find operating specs, timing ranges, contact capacities, dimensions, diagrams of contact and terminal arrangements, and data on mounting and installation accessories.

For your copy, write: Dept. A34-95.

AGA — ELASTIC STOP NUT CORPORATION OF AMERICA
Elizabeth, New Jersey

▲ For more details circle NED-275 J9 on enclosed inquiry slip ▲



STANDARD BASE available in single solenoid, 3-way; single solenoid, 4-way; double solenoid, 4-way.

SUB-BASE available in single solenoid, 4-way; double solenoid, 4-way.

25 NEW JIC SOLENOID AIR VALVES by SCHRADER

...meet and exceed JIC specs

Twenty-five new compact and rugged JIC Solenoid Air Valves have been added to the Schrader line. They are easy to install. Have roomy junction boxes for convenient electrical connections. Can be operated by hand without current in an emergency. Safe, recessed override buttons prevent accidental operation. Fifteen of these new JIC Valves are made with standard base; ten with sub-base.

Write for catalog insert with complete specifications and data on these 5 new Schrader JIC Solenoid Air Valves.

Schrader® a division of SCOVILL

A. SCHRADER'S SON
Division of Scovill Manufacturing Co.
459 Vanderbilt Ave., Brooklyn 38, N. Y.
QUALITY AIR CONTROL PRODUCTS

▲ For more details circle NED-276 J9 on enclosed inquiry slip ▲

COUNTING DIALS settings can be locked in place

Styled for modern control panels, Borg Microdial multiturn counting dials are available in five variations of red, gray, and black colors. Mechanically they are similar to all quiet, smooth-operating Microdials for fractional-turn setting of instrument and control shaft positions. A contour lever brake arm locks settings in place, yet does not interfere with dial adjustment. Made by **Amphenol-Borg Electronics Corp.**, Borg Equipment Div., 120 S. Main St., Janesville, Wis.

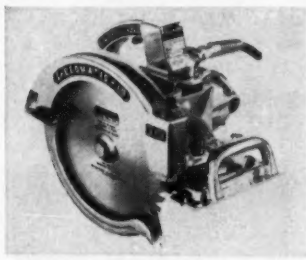
▲ For more details circle NED-277 J9 on enclosed inquiry slip ▲

SEALING ELECTRIC CONNECTOR is waterproof and dust-tight

Rated for 15-amp 125-v service, this Bantam Flip Seal connector is UL and CSA approved. Black neoprene unit is usable wherever conditions of water, oil, moisture, dust, or similar hazards exist. The flexible lip overlaps the male cap to seal connection. Seals at the wire entrances also exclude dirt and moisture. It disconnects easily. Made by **Rodale Mfg. Co.**, Emmaus, Pa.

▲ For more details circle NED-278 J9 on enclosed inquiry slip ▲

PORTABLE ELECTRIC SAW is heavy-duty 10¼-in. model

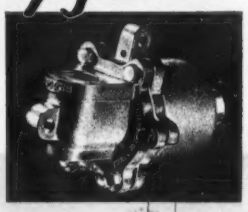


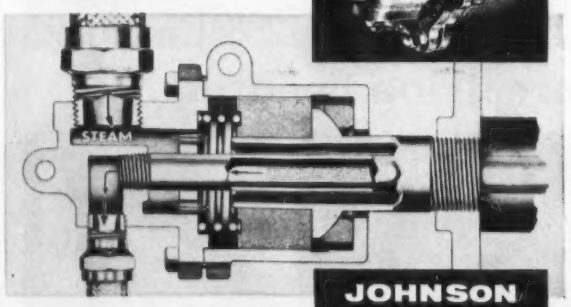
All types of cuts up to 3¾ in. deep from long rips to compound miters are made easily with this Model 510 construction saw. By using an abrasive blade in place of the 10¼-in. saw blade, it will also cut such materials as steel, plastic laminates, masonry, and nonferrous metals. The 13-amp motor coupled with a helical gear drive provides ample power and optimum blade speed of 5700 rpm for all operations from light to heavy duty. It weighs 24 lb, is well balanced, has a telescoping guard, and a dust blower to keep the cutting line clear. Standard equipment includes a 10-ft three-conductor cord, rip guide, wrench, carrying case, and operating manual. Accessories include metal cutting, crosscut, planer, rip, and abrasive blades and a protractor gage. Made by **Porter-Cable Machine Co.**, 107 Seneca St., Syracuse, N. Y.

▲ For more details circle NED-279 J9 on enclosed inquiry slip ▲

Need a rotary joint?

...for water-cooled or steam-heated rolls...





Type SB illustrated is completely self-supporting. For fully engineering data write for Bulletin S-3002.

JOHNSON Rotary Pressure JOINTS

Johnson started the whole idea . . . is far ahead in know-how, available types and sizes. Johnson Joints are completely packless, need no lubrication or adjustment. Used on dryer rolls, mills, waxers, calenders, slashers, printing presses, etc.—handling steam, water, hot heat transfer oils, Dowtherm, Mansanto Aroclors, etc. Actually serving under pressures as high as 2400 psi. Sizes up to 8".

THE JOHNSON CORPORATION
812 Wood St., Three Rivers, Michigan

▲ For more details circle NED-280 J9 on enclosed inquiry slip ▲

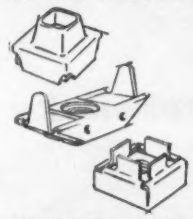
FASTENERS!

INCLUDING WIDE-APPLICATION TYPES LIKE THESE:

Plastisol Sealer Nuts — Seal against dirt, liquids etc. Minimize damage and noise from vibration. Hex nut is ⅜" with 10-24 NC2 thread. Cupped spring steel washer ⅝" OD. Height of sealant 0.125".

Clinch-On Nuts — High torque resistance without lockwashers, welding etc. when inserted in D-shaped hole. OD is 9/16", slabbed on one side to 0.426-435". Thread depth 0.173". NC2 thread sizes: ¼"-20, ¼"-28, 8-32, 10-24, 10-32, 12-24.

AND SPECIALS ENGINEERED TO YOUR SPECIFIC NEEDS:

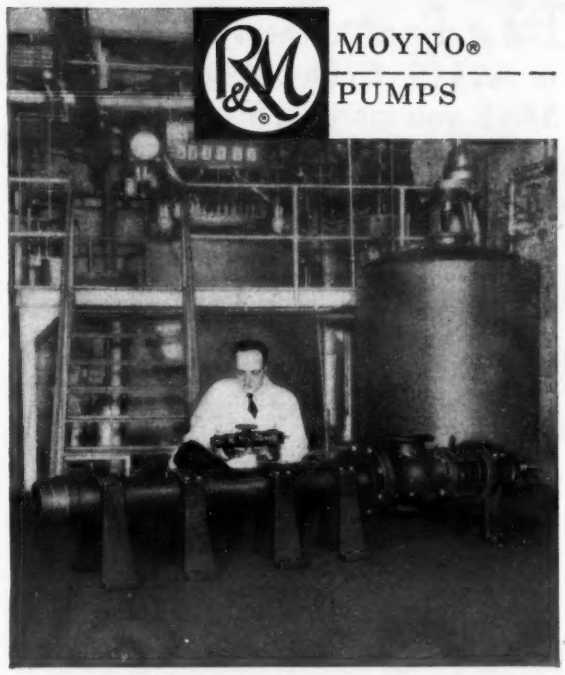


Thoroughly experienced in designing and producing superior fasteners for every type of application, Stanley is the leader in combining modern plastics with metal to provide ideal primary and secondary sealing-type fasteners. If you have a tough-to-solve fastening or fastening-sealing problem, our design, engineering and production facilities are at your disposal.

STANLEY INDUSTRIAL HARDWARE SALES

STANLEY®
THE STANLEY WORKS
Dept. I, 58 Lake Street
NEW BRITAIN, CONNECTICUT

▲ For more details circle NED-281 J9 on enclosed inquiry slip ▲



MOYNO® PUMPS

capacities: from 1/100 to 500 gpm
pressures: up to 1000 psi

MOYNO pumps are available in nine sizes with capacities ranging from minimum metering flow to 500 gpm and pressures from zero to 1000 psi. Positive displacement delivers uniform discharge without pulsation, agitation or turbulence. Solutions ranging from thin watery slurry to extremely viscous paste, corrosives, abrasives and even solids in suspension are economically handled without excessive pump wear.

MOYNO's unique *"progressing cavity"* principle with only one moving part and special resistant internal parts slashes pump maintenance costs on problem materials that often ruin other pumps. Almost any substance that can be forced through a pipe can be pumped by a MOYNO.

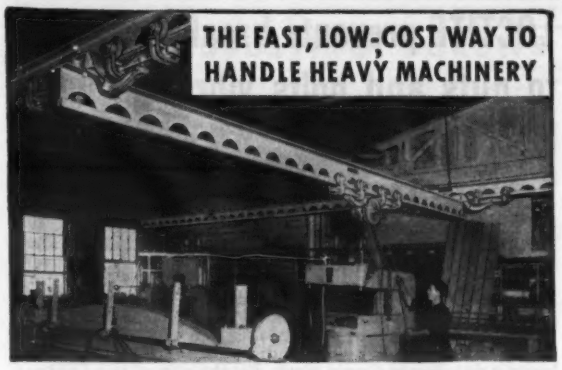
To learn how a MOYNO can cut your pumping costs, write today for Bulletin 30-NE

ROBBINS & MYERS, INC.

motors, household fans, Propellair industrial fans, hoists, Moyno industrial pumps
SPRINGFIELD, OHIO · BRANTFORD, ONTARIO

Cutaway view of Moyno Pump

▲ For more details circle NED-282 J9 on enclosed inquiry slip ▲



Inexpensive Hand-Propelled Crane with Chain Hoist

If hard, back-breaking work is required on the part of several men to move a machine in your plant, you should seriously consider either hand-propelled or electric Cleveland Tramrail cranes. Work that requires hours can often be done in minutes with an overhead crane. Many cranes pay for themselves in only a few months time.

GET THIS BOOK!
BOOK No. 2008
Packed with valuable information...

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6636 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle NED-283 J9 on enclosed inquiry slip

Combination
TRUCK *and* DRAIN RACK
Loads Automatically

For convenient, safe handling of barrels or drums . . . also serves as drain rack. Two styles—handles welded to frame or with detachable handles, one set can serve any number of trucks. Sturdy welded construction. Free-rolling 8" roller bearing wheels. Weight app., 90 lbs.

Prices subject to change without notice

DEPENDABLE MATERIALS HANDLING EQUIPMENT

DESIGNED AND MANUFACTURED BY
Palmer-Shile Co.
16015 FULLERTON AVE., DETROIT 27, MICH.
Export Division, 75 West Street, New York 6, N. Y.

For more details circle NED-284 J9 on enclosed inquiry slip

REALLY SMALL IN SIZE AND PRICE!

Square D's *NEW*
TYPE A TIMER

...for applications requiring shorter timing periods, ± 15% accuracy and no interlocks.

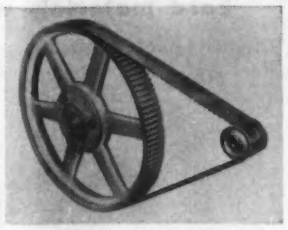
FOR APPLICATIONS requiring timing periods up to 3 minutes, maximum accuracy and 1 or 2 instantaneous interlocks ...specify Square D's Type B, machine tool standard for more than 20 years!

Write for Timer Bulletin 9050...
Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE
SQUARE D COMPANY

For more details circle NED-285 J9 on enclosed inquiry slip

BELTS & PULLEYS
toothed belt does not stretch



Tooth grip principle and construction of Positive Drive belts and pulleys eliminate belt slipping and stretching. Molded teeth on the belt make positive engagement with mating axial grooves on the pulleys. Drives are available up to 600 hp and for speeds from under 100 fpm to over 10,000 fpm. They make possible savings in weight, space, and bearing specifications. Power transmission drives from electric typewriters to heavy industrial machines are applications. Made by **Worthington Corp.**, Harrison, N. J.

For more details circle NED-286 J9 on enclosed inquiry slip

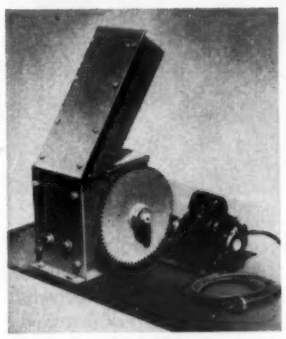
FELT-TIP MARKER REFILL
in eight quick-drying ink colors

Long service life through use of an inexpensive refill barrel is possible with this Cado-marker for use on any porous surface. Factory sealed with an aluminum

screw for indefinite shelf-life, the refill has a color disc to identify the contents. To use the refill, the screw is removed with a thin coin and is replaced with the felt tip assembly removed from the original marker. The cap from the old marker is retained to protect the felt tip when it is not in use. The transparent, quick-drying, waterproof, permanent ink is offered in red, blue, green, yellow, brown, orange, purple, and black colors in the refill barrels. Made by **Cushman & Denison Mfg. Co.**, 730 Garden St., Carlstadt, N. J.

For more details circle NED-287 J9 on enclosed inquiry slip

BOTTLE CRUSHER
makes glass salvageable

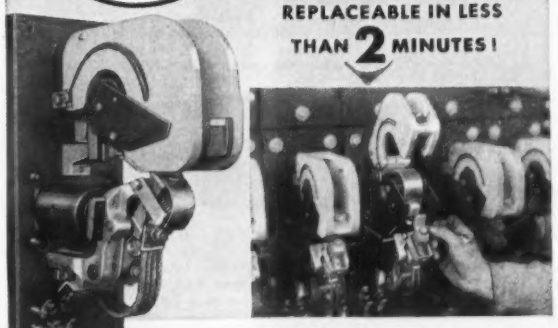


Broken and unusable bottles are safely crushed to easy-to-handle glass pieces with this Specialty bottle crusher. Salvageable broken glass can be stored in one-tenth the space normally taken up by bottles. Driven by a standard electric motor, crusher can be set up anywhere and will dispose of up to 1-qt bottles as fast as they are fed to it. Price is $180. Offered by **Specialty Engineering Co.**, 3300 Frankford Ave., Philadelphia 34, Pa.

For more details circle NED-288 J9 on enclosed inquiry slip

for EASIER Maintenance
EC&M LINE-ARC® CONTACTORS

FRONT AND REAR CONTACTS REPLACEABLE IN LESS THAN 2 MINUTES!



• The LINE-ARC principle gives exceptionally long contact-life. When necessary, contacts are easily accessible for quick renewal, using only a standard wrench. No other parts need be removed first. *Write for Bulletin 7004*

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

7931-R

For more details circle NED-289 J9 on enclosed inquiry slip

NEW from Signode

Heavy-duty feed wheel tool saves a foot or more of strap every time it's used

The air-powered FN-114 takes 1¼-inch strapping directly from the dispenser. No waste strap.

Can save a foot or more of strap every time it's used • Easier and faster to load than a windlass type tool • Unlimited takeup...pulls pre-set tension every time • Plenty of power...up to 3000 lb. tension.

See a demonstration of this *first* feed wheel heavy-duty air-powered tensioning tool—on your premises, at your convenience.

SIGNODE STEEL STRAPPING CO.
2643 N. Western Avenue, Chicago 47, Illinois
Offices Coast to Coast
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

For more details circle NED-290 J9 on enclosed inquiry slip

TAKE A LOAD... ANY LOAD
FROM GROUND

TO CARRIER *in seconds*

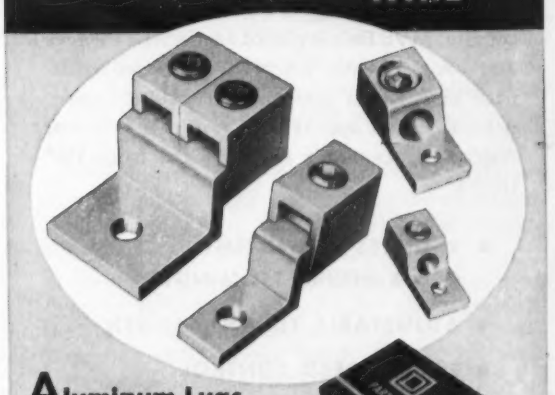
Any load that must be hefted or hauled by *hand* takes time . . . costs money. Take ground level loading of trucks for example. One company used to do it like this: a power truck and driver to shuttle loads from warehouse to truck; two men to transfer loads from fork truck to carrier, onto hand trucks, wheel them into carrier, unload by hand again. Time 2½ hours; manhours: 7½; costs: *plenty!* Now, with a Magliner Mobile Loading Ramp on the job, the power truck driver does it alone *in an hour's time.* Savings: *plenty!* For the complete story . . .

MagLiner
WRITE TODAY FOR BULLETIN DB-211
Magline Inc., P. O. Box 169
Pinconning, Michigan

MAGNESIUM MOBILE LOADING RAMPS

For more details circle NED-291 J9 on enclosed inquiry slip

LUGS FOR ALUMINUM WIRE



Aluminum Lugs in 4 sizes...

UL listed—accommodate either aluminum or copper wire in sizes #0, 250 MCM, 500 MCM Single, 500 MCM Twin, all maximum. Spring washers in kits. *Write for literature. Square D Company, 6060 Rivard St., Detroit 11, Michigan*

SQUARE D COMPANY

For more details circle NED-292 J9 on enclosed inquiry slip

NEEDS NO OUTSIDE POWER SOURCE!

PARTLOW
Throttling Gas Valve

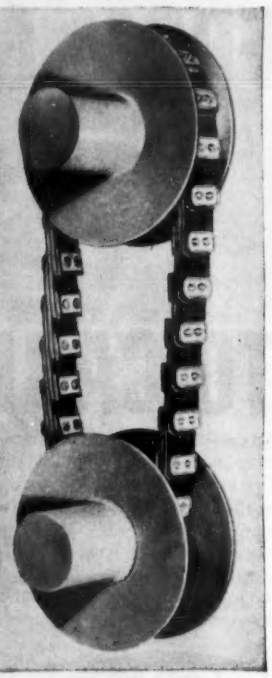
Partlow gas controls for heating appliances are completely self-contained — need no outside power or extra accessories. Accurate . . . maintain exact temperatures without seesawing or overshooting. Convenient . . . elements can be changed at the job site. Available in 9 optional temperature ranges up to 1100°F., and in models to accommodate pressures up to 20 psi., and pipe sizes from ¼ to 3 inches.

For details write Dept. N-959
The Partlow Corp., New Hartford, N.Y.

PARTLOW
TEMPERATURE CONTROLS

▲ For more details circle NED-293 J9 on enclosed inquiry slip ▲

NEW!
MANHEIM VARIABLE SPEED BELT



Now outdates wood block and variable speed v-belts

Replaces Enclosed Drive Belts without Disassembly

MVS Belt sets a new standard in V-to-V drives because it is adjustable to any length and is installed in minutes instead of hours. Its patented design eliminates drive disassembly. MVS Belt is placed around the sheaves and coupled with T-screws. Uniform thickness and width guarantee constant power delivery at all speeds with no cross-sectional distortion. Available in 26 widths from 1½" thru 5".

- REDUCES DOWN-TIME FROM HOURS TO MINUTES
- ADJUSTABLE TO ANY LENGTH
- EXACT SPEED CONTROL
- UP TO 90% LESS VIBRATION

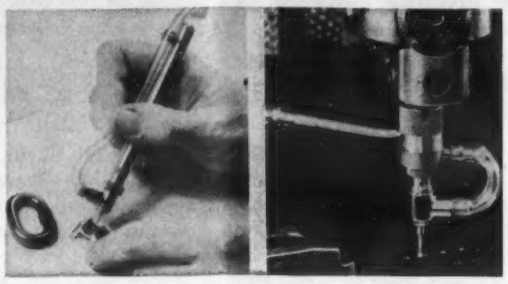
Write Today for Complete Information.

MVS
MANHEIM MANUFACTURING & BELTING COMPANY
Manheim 4, Penna.
©M. M. & B. Co. 1958

▲ For more details circle NED-294 J9 on enclosed inquiry slip ▲

HIGH SPEED CUTTER-GRINDER
300,000-rpm air tool grinds hard materials without heat

Extremely hard materials such as ceramics, glass, carbides, and certain metals can be machined with diamond and carbide tools used in the Airotor, an air-



driven cutting and grinding tool. Operating at spindle speeds in excess of 300,000 rpm, it produces small holes, grooves, slots, and die cavities. Tool is an industrial adaptation of a dental tool and, being only ⅜ in. in diameter by ½ in. long, it can be used in difficult-to-reach areas.

It is usable as a hand tool, or it is adaptable to jig borers, lathes, milling machines, and pantographs. An air supply of 1.25 cfm at 40 psi is required. A furnished control unit regulates, filters, and lubricates incoming air. Operating speed dissipates heat from the tool itself and from the grinding surface. Made by **Ashcombe Co.**, 1320 W. Market St., York 33, Pa.

▲ For more details circle NED-295 J9 on enclosed inquiry slip ▲

UNIVERSAL PARTS COUNTER
handles ⅛ to 4-in. parts at speeds to 20 pieces per second

Transistorized electronic Model 605 automatic parts counter will accommodate odd shaped items and those parts which might interlock. It handles parts measuring from ⅛ to 4 in. and weighing from 1/20 oz to 1 lb apiece at speeds up to 20 pieces per second. Changeover from one part to another takes less than 1 min. Mounted on casters, counter plugs into any 115 v 60-cycle source.

Parts are batch loaded directly into counter, or fed into hopper by auxiliary conveyor. Specific quantities can be counted out for packaging into preselected group sizes, or items may be counted continuously and a total shown, as for inventory. Made by **Atronic Products, Inc.**, Industrial Products Div., 1 Bala Ave., Bala-Cynwyd, Pa.

▲ For more details circle NED-296 J9 on enclosed inquiry slip ▲

SEND FOR 16-PAGE CATALOG OF

LIGHTER, MORE FLEXIBLE METAL HOSE FOR TOUGH JOBS

TITEFLEX makes flexible metal hose from end to end, inside and out, right in our own plant. Specify it! You get extra lightness and flexibility because its quality is always under Titeflex control. Use it where temperatures exceed limits of non-metallic hose, where fluids affect other hose materials.

APPLICATIONS: Hydraulic, Lubrication, Coolant, Vacuum, Transfer, Steam, Fuel. Hot Solvents, Tar, and Chemical lines for many industries.

FEATURES: Flexible convoluted innercore, soldered or brazed end fittings, permanently pressure-tight. Innercores of brass, alloy bronze, nickel alloy steel, monel. Braid coverings of silicon-bronze, copper-clad steel, stainless steel, others. Fittings of brass, bronze, malleable iron, carbon steel, stainless steel, and other alloys.

GET FULL DATA and specs in the complete TITEFLEX Metal Hose and Fittings Catalog. At your TITEFLEX Distributor, or write direct.

titeflex
titeflex inc., springfield, mass.
PACIFIC DIVISION • SANTA MONICA • CALIFORNIA

▲ For more details circle NED-297 J9 on enclosed inquiry slip ▲

LOCTITE prevents breakdowns due to nuts and bolts vibrating loose

Mr. Raymond P. Nurse of Sherman Enterprises says:

"We had trouble with our machines vibrating loose. We tried several different methods of fastening, but they did not solve our problem. Then we decided to give LOCTITE Sealant a real test by using it at the National Duckpin Bowling Tournament. Twenty-four pin setters assembled with LOCTITE were used steadily for three weeks . . . 18 hours a day, seven days a week. By the end of the Tournament, LOCTITE had given an outstanding performance. We received many compliments on the operation of our machines and part of this credit goes to the American Sealants Company." Now all critical fasteners in the Sherman Automatic Pin Setter are secured with LOCTITE against vibration. LOCTITE is a thin liquid that hardens when confined between closely-fitting metal parts. One drop replaces all sizes of lock nuts, lock washers, lock screws, staking, jam nuts, and interference threads. It forms a tough heat and oil-resistant bond that resists any amount of vibration . . . yet ordinary tools may be used to remove fasteners. LOCTITE requires no heating or mixing . . . treated parts can be stored for days . . . lock only when assembled. Write for literature, free sample.

LOCTITE® SEALANT
AMERICAN SEALANTS COMPANY
229 Woodbine St., Hartford 6, Conn.

▲ For more details circle NED-298 J9 on enclosed inquiry slip ▲

TOUGH BUYERS DEMAND
REZNOR downflow heaters for high-ceiling applications

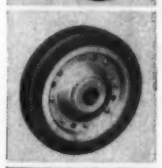
Where cranes, machinery, or inventory stacks require abnormally high placement of the heater, the tough buyer insists on a Reznor Downflow Heaters. The Downflow projects heat to the area where it's needed, even from a height of 40 feet! Simple to install, too.

Available with aluminized or stainless steel heating elements, gas modulation, adjustable louvers and electric ignition. Write for catalog.

REZNOR Manufacturing Co., Dept. 41F, Mercer, Pa.

▲ For more details circle NED-299 J9 on enclosed inquiry slip ▲

these are the FEATURES THAT ASSURE BETTER PERFORMANCE IN



DARNELL
CASTERS AND WHEELS

RUBBER TREADS . . . a wide choice of treads suited to all types of floors, including Darnellprene oil, water and chemical-resistant treads, make Darnell Casters and Wheels highly adapted to rough usage.

RUST-PROOFED . . . by zinc plating. Darnell Casters give longer, care-free life wherever water, steam and corroding chemicals are freely used.

LUBRICATION . . . all swivel and wheel bearings are factory packed with a high quality grease that "stands up" under attack by heat and water. Zerk fittings are provided for quick grease-gun lubrication.

STRING GUARDS . . . Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

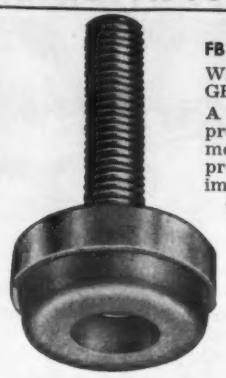
Will help make your selection easier

Write for Free Darnell Manual

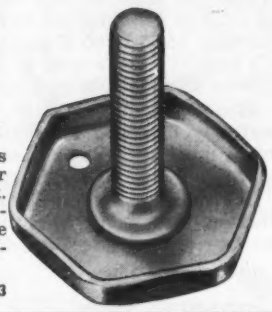
DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
37-28 SIXTY-FIRST ST., WOODSIDE 77, L. I., N. Y.
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

▲ For more details circle NED-300 J9 on enclosed inquiry slip ▲

OHIO ADJUSTING SCREWS



FB ADJUSTABLE FEET
WITH NON-MARKING GRAY PAD
A handsome, sturdy part that provides suction to hold equipment in place, absorb vibration, prevent marring of floors and improve product appearance.
Thread sizes 5/16-18 to ½-13



FT ADJUSTABLE SCREWS
Large hex head gives broad cupped base for easy hand adjustment. Used extensively on appliances as adjustable feet and as hand adjusting screws.
Thread sizes ¼-20 to ½-13

OHIO ADJUSTING SCREWS

OVER 50 YEARS OF BETTER FASTENING
Samples and information available upon request
THE OHIO NUT & BOLT CO.
14 First Avenue • Berea, Ohio

▲ For more details circle NED-301 J9 on enclosed inquiry slip ▲

ANOTHER PANNIER MASTER MARKER!

PANNIER'S STEEL LETTERS • FIGURES
- Longer lasting, less mushrooming
- Better impressions—clear, clean
- Letters, figures, or symbols
- In sets, assorted, or singly

Pannier Tested Steel Stamps provide you with clear, clean markings, maximum safety, longer life and highest quality.

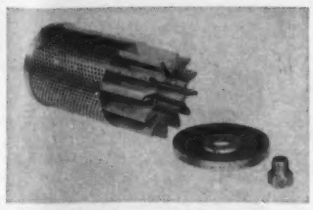
BIRTHMARKED MATERIALS

Write for data. Wide variety of sizes available.

MARKING DEVICES
THE PANNIER CORPORATION
301 Pannier Bldg. • Pittsburgh 12, Pa.
Offices: Los Angeles • Chicago • Cleveland • Philadelphia • Birmingham

▲ For more details circle NED-302 J9 on enclosed inquiry slip ▲

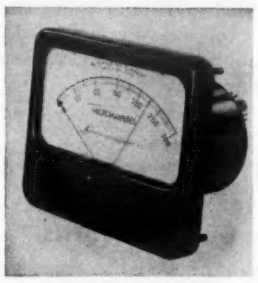
SUMP TYPE FILTERS
for 8 to 50-gpm flow range



Dirt, rust, lint, and sludge are removed from hydraulic and lubricating oils, coolants, and other liquids by 3000 Series sump type filters. Five sizes covering flow ranges from 8 to 50 gpm are equipped with a 100-mesh Monel element for filtration to 140 microns. Filtering area ranges from 81 to 505 sq in. Perforated steel filter housing for sump installations insures maximum flow with minimum restriction. They can be installed individually or in multiples. Made by **General Filters, Inc.**, 43800 Grand River Ave., Novi, Mich.

▲ For more details circle NED-304 J9 on enclosed inquiry slip ▲

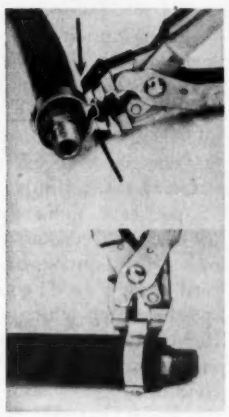
CONTACT METER CONTROLLER
indicates any electrical variable



Consisting of contact meter, built-in transistor amplifier power supply, and load relay, package type Model MR contact meter controller continuously indicates any electrical variable. It also provides reliable, accurate high or low limit control. Input signal can be as low as 1 mu w at less than 1 microamp, or as high as several thousand volts or amperes. Indicating instrument is accurate within 2 per cent and has repeatability of less than 1 per cent of full scale. Contacts are rated 10 amp, 115 v ac, noninductive. Made by **Larson Instrument Co.**, 24 Orchard St., Tarrytown, N. Y.

▲ For more details circle NED-305 J9 on enclosed inquiry slip ▲

HOSE CLAMP
one locking lug speeds assembly

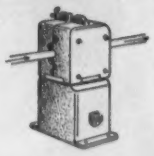


One U-shaped locking lug instead of the usual two speeds assembly of this Mechanical-Loc circle clamp designed for low pressure hose and tubing. Clamp is squeezed with specially designed toggle-action pliers which develop a 12:1 mechanical advantage, or with ordinary pincer pliers. Clamp is also easily removed with the special tool for re-use. It has a bright electrocyanide zinc finish and is offered in 15 sizes from 0.42 to 1.22 in. ID. Made by **Cuyahoga Products Corp.**, Circle Clamp Div., 10254 Berea Rd., Cleveland 2, Ohio.

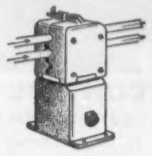
▲ For more details circle NED-306 J9 on enclosed inquiry slip ▲

PUMPING IDEAS
POSSIBLE ONLY with a SIGMAMOTOR PUMP

MOVE CORROSIVE LIQUIDS

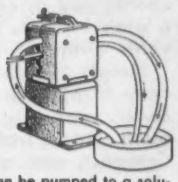


Material being pumped never comes in contact with pump mechanism. Wave-like motion of steel fingers forces material through Tygon tubing. By changing size of tubing, capacity can be increased or decreased. Pump housing opens for removal and insertion of tubing.

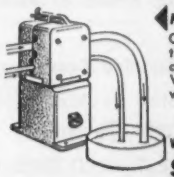


PUMP 2 OR 3 DIFFERENT LIQUIDS SIMULTANEOUSLY
Some models will accommodate up to four tubes so that four different liquids can be passed through the pump at one time without danger of contamination.

FEED AND MIX



One or more tubes can be feeding material to a mix while a larger tube is recirculating the liquid to produce agitation and thorough mixing. Viscous materials can be pumped without danger of gumming or plugging. Remove tube and pump is clean.



METER ADDITIVES
One or more additives can be pumped to a solution in the exact amount desired by selecting the correct size of tubing and regulating pump speed. Various controls can be incorporated to close valves ahead of pump.

Capacities from 0.5 cc. per min. to 4.5 G.P.M.
Write for complete information on sizes and capacities.

SIGMAMOTOR, INC.
33 N. Main Street • Middleport, N. Y.

▲ For more details circle NED-307 J9 on enclosed inquiry slip ▲

All-Service Xtra Cushion Solid Tire from Goodyear—a rugged performer from any angle!

New Slant on Pressed-on "Solids"

Have you ever seen an All-Service "Solid" from this angle before? Chances are, you haven't. But we photographed it this unique way to dramatize some very practical points.

For example, notice the tread design of this Goodyear Industrial Tire. Notice how the lugs are sharply angled for superior traction on ramps or wet, slippery surfaces.

Check the thickness of that tread too. It's extra thick for extra resilience and cushioning. The result: lower floor and truck maintenance costs. Less load damage, too.

Add to all this—tougher compounds for minimum chipping and cutting, lasting adhesion of rubber to base band, *plus* maximum smoothness and stability.

These advantages can mean only one thing to you: Superior service at lower cost. For all the facts on the All-Service—and the complete line of Goodyear Solid and Pneumatic Industrial Tires—call in your Goodyear Dealer. Or write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.

INDUSTRIAL TIRES BY
GOODYEAR
More tons are hauled on Goodyear Truck Tires than on any other kind

All-Service —T. M. The Goodyear Tire & Rubber Company, Akron, Ohio
▲ For more details circle NED-308 J9 on enclosed inquiry slip ▲

From FLAME to FOAM in 20 seconds!

0 SECONDS: Gasoline-covered surface ignites in test that shows how effectively Rockwood stands guard against fire.

4 SECONDS: Rockwood Heat-Actuated Detector "senses" temperature rise of air, "triggers" release of FogFOAM.

20 SECONDS: Fire out — smothered by blanket of FogFOAM which barely rippled water's surface . . . kept fire within tank.

Almost as the flames break, the Rockwood Spot PROTECTION System goes into fast, positive action! Doesn't have to wait for a sprinkler head to fuse, because its Heat-Actuated Detector "senses" any dangerous rapid *rise in air temperature* (20 degrees a minute or faster) . . . automatically sends fast signal to release mechanism. Designed for control of hydrocarbon, alcohol, or ordinary combustible type fires, system dispenses Double Strength FOAM, All-Purpose FOAM, or WaterFOG depending on requirements.

You'll find Rockwood Spot PROTECTION Systems everywhere — guarding installations ranging from dip tanks to tank farms from all types of fires. Whether they're in fixed pipe lines or integrated in mobile units, each is precisely tailored to its requirements by engineers with years of experience in industrial fire protection. Components are fabricated at the Rockwood factory by specialized manufacturing methods using finest quality materials.

Write today for full information.

ROCKWOOD SPRINKLER COMPANY
563 Harlow St., Worcester 5, Mass.

Engineers Water . . . to Cut Fire Losses

Distributors in all principal cities

▲ For more details circle NED-303 J9 on enclosed inquiry slip ▲

How To Get Things Done

BOARDMASTER VISUAL CONTROL

Gives you a Graphic Picture of your operations, spotlighted in color. You see what is happening at a glance. Facts at eye level—saves you time, prevents errors.

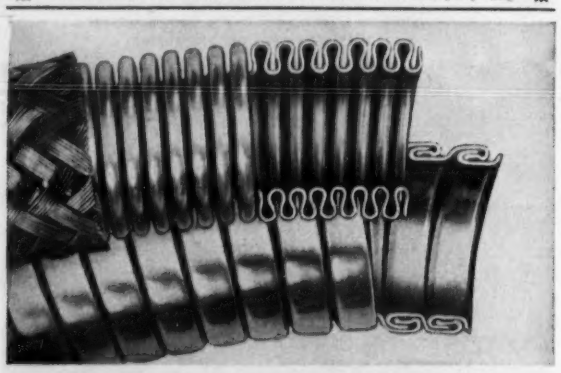
Simple, flexible—easily adapted to your needs. Easy to operate. Type or write on interchangeable cards, snap in grooves. Ideal for production, scheduling, sales, traffic, inventory, etc. Made of metal. Compact, attractive.

Complete Price $49.50 Including Cards

FREE 24-Page Illustrated Booklet N-500 Mailed Without Obligation

GRAPHIC SYSTEMS 55 WEST 42ND STREET NEW YORK 36, N. Y.

▲ For more details circle NED-310 J9 on enclosed inquiry slip ▲



TWO BASIC TYPES OF FLEXIBLE METAL HOSE AVAILABLE FROM ANACONDA

Seamless Corrugated and Stripwound. Both types available in a wide range of sizes and styles in any workable metal. Furnished with or without end fittings attached. *Seamless* (top) is an easily installed, low-maintenance, long-life solution to any flexible connector problem involving conveyance of steam, oil, liquids, gases under pressure. *Stripwound* (bottom) heavy-duty hose combines all-metal strength with extreme flexibility, permitting easy installation and handling—for steam, water, oil, tar, asphalt, etc.

FREE CATALOG simplifies selection & ordering of flexible metal hose and tubing. For copy, write: Anaconda Metal Hose Division, The American Brass Company, Waterbury 20, Conn. 59135

WHEREVER CONNECTORS MUST MOVE **ANACONDA®** METAL HOSE

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HEATING PROCESS? PROTECT MATERIAL and EQUIPMENT

Automatically with *Alnor*® PYROTAC

Not expensive...but a simple, automatic way to safeguard your investment in heating equipment and materials in process.

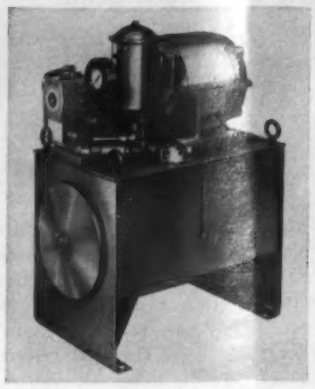
The precision-built Pyrotac constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the equipment at a safe, preset temperature. May also be used as a controller on processes where shutdown is required upon reaching final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures complete safety if couple or lead wire should break.

Write for Pyrotac bulletin. Attach this ad to your letterhead, send to: Illinois Testing Laboratories, Inc., Room 529, 420 No. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-312 J9 on enclosed inquiry slip ▲

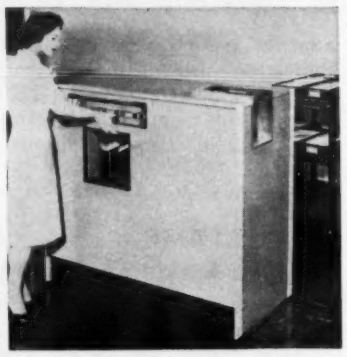
HYDRAULIC POWER PACKAGE
10-gal unit has many applications



Hydraulic power and control for diverse industrial machinery applications requiring low hydraulic horsepower are provided by the T10 hydraulic power package. Uses include gaging, transferring, elevating, indexing, and chuck and clutch operations. Basic 10-gal reservoir requires a floor area of 25 x 14 in. It is equipped with clean-out covers, fluid level indicators, breather-filler, removable baffle, and bottom drain plug. Options include return line filter with by-pass check valve, pressure line by-pass filter, and magnets for removal of metallic particles. Recommended maximum motor size is 3 hp. Balanced or variable volume vane pumps delivering up to 5 gpm can be supplied. Made by **Vickers Inc.**, 1400 Oakman Blvd., Detroit 32, Mich.

▲ For more details circle NED-313 J9 on enclosed inquiry slip ▲

SOLID-STATE COMPUTER
has 50,000-character "memory" and operates from punched cards



Production control, billing, sales analysis, and inventory control can be coordinated into a single unified processing procedure on this Univac Solid-State 80 computer. It is universally adaptable to business and governmental punch-card installations. It operates in millionths of a second. Words can be read at the rate of 58,800 per second, and numbers can be added at 11,770 per second. "Memory" capacity is 50,000 characters of information.

Computer permits "card stretching," allowing up to 25 per cent more data than was possible previously to be stored on an 80-column card. It is composed of a central processor, illustrated 80-column high speed card reader, an 80-column read-punch unit, and a high speed printer which operates at 600 lines per minute. Relatively low in cost, it is compact, easily installed and maintained, uses but little power, and needs no air conditioning. Made by **Sperry Rand Corp.**, Remington Rand Div., 315 Fourth Ave., New York 10, N. Y.

▲ For more details circle NED-314 J9 on enclosed inquiry slip ▲

...MARK AND DEMAGNETIZE with... *Luma* No. 160 ETCHTOOL

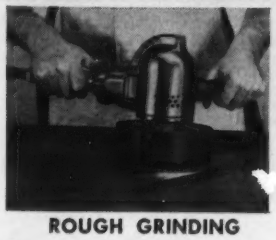
Write for New Catalog descriptive of all model Etchtools and Demagnetizers.

Mark the hardest steel, stainless steel, steel alloys or carbides with the ease and legibility of a pencil. 4 types of interchangeable marking points to serve every purpose. 15 distinct marking heats. Easy to operate. Two tools in one. Demagnetizes over a 7-inch width. Valuable when tools have been in contact with magnetic chuck.

Luma THE LUMA ELECTRIC EQUIPMENT CO.
P.O. Box 132-NED • Toledo, Ohio

▲ For more details circle NED-315 J9 on enclosed inquiry slip ▲

Airetool Grinders Speed Production



ROUGH GRINDING

FINE FINISHING

When you want to take down rough spots, or speed up a tough grinding job on flat or curved surfaces, use Airetool Model 700-V pneumatic grinder, left above. It's easy to handle with 6" cup wheel or brush, available in 4500 or 6000 rpm models.

Model 500-V pneumatic sander (above, at right) is perfectly balanced for feather-edge accuracy in fine metal finishing. Takes 7" sanding disc. 3 models with 2300, 3000 and 4000 rpm speeds.

For full information about Airetool pneumatic production tools, write for Bulletin 67. Airetool Manufacturing Company, Springfield, Ohio.

BRANCH OFFICES: New York, Chicago, Tulsa, Philadelphia, Houston, Baton Rouge
REPRESENTATIVES in principal cities of U.S.A., Canada, Mexico, South America, England, Europe, Puerto Rico, Italy, Japan, Hawaii.
EUROPEAN PLANT: Vlaardingen, The Netherlands
CANADIAN PLANT: Brantford, Ontario

AIRETOOL MANUFACTURING COMPANY SPRINGFIELD, OHIO

▲ For more details circle NED-316 J9 on enclosed inquiry slip ▲

HERE'S THE HUB

of the WHEEL INDUSTRY

DICO 5 BOLT

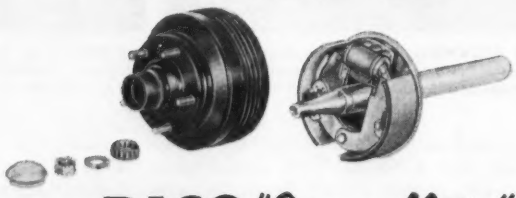
8" - 9" - 12" DEMOUNTABLE **WHEELS**

DICO hubs are designed to meet radial, thrust and torsional loads. The 5-bolt construction of DICO wheels is a proven automotive practice.

ONE HUB FITS ALL WHEELS

4.80/4.00x8	2.50"	Standard Rim
4.80/4.00x8	3.75"	Wide Base Rim
5.00x8	3.75"	Standard Rim
5.70/5.00x8	4.25"	Wide Base Rim
5.50x8	4.25"	Wide Base Rim
6.90/6.00x9	4.00"	Standard Rim
4.80/4.00x12	4.00"	Wide Base Rim
5.30/4.50x12	4.00"	Wide Base Rim
6.00x12	4.00"	Wide Base Rim

. . . and HERE'S THE BRAKE FOR 8" - 9" - and 12" WHEELS



DICO *"Surg-o-Matic"* **INDUSTRIAL BRAKES**

7" Drum with 31 square inches lining surface.

"Surg-o-Matic" self-operating brake actuator incorporated in coupler hitch for Trailer Service. Brakes also supplied for lever operation.

DICO 201 S. W. 16th St., Des Moines 5, Iowa

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FAST REPAIR, PATCHING FOR FLOORS...

- *Asphalt Mastic—Flooring Clay Emulsion Binder*
- *Latex Concrete Patch (small work)*
- *Latex Industrial Flooring (large work)*
- *Epoxy Flooring —for problem floors*

Keep factory and other work floors comfortable and accident free with these Flintkote Flooring Products—all are trowel finished.

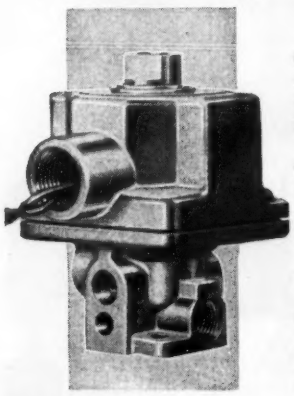
For complete information on mixes, coverage, uses and speed of application write: The Flintkote Company, Industrial Division, 30 Rockefeller Plaza, New York 20, N. Y.

FLINTKOTE

Manufacturer of America's Broadest Line of Building Products

▲ For more details circle NED-318 J9 on enclosed inquiry slip ▲

Skinner three-way solenoid valves for medium-size cylinder control



Can also be used to operate smaller cylinders where extra fast cycling speeds are called for.

Type: Three-way normally open, normally closed and dual outlet—Type A Series.

Operating Pressure Differential: Up to 125 psi.

Orifice Sizes: 5/32" diameter.

Pipe Size: 1/4" NPT (both body ports)—1/8" NPT sleeve port.

Voltage: Common AC and DC voltages.

Media and Ambient Temperature Range: Minus 40° to plus 180°F.

Media: Oil, air and inert gases.

Advantages: Engineered to UL's rigid standards; direct acting; bubbletight; stainless steel internal parts; compact; light; spring-loaded plunger for positive closing; mounts in any position; die-cast zinc body; 1/2" conduit NPT housing.

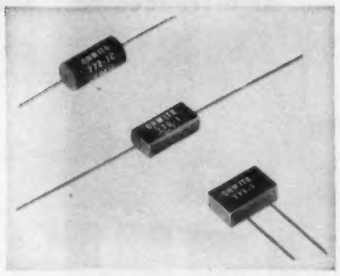
Contact a Skinner Representative listed in Yellow Pages or write us at Dept. 439.

SKINNER ELECTRIC VALVES

THE CREST OF QUALITY THE SKINNER ELECTRIC VALVE DIVISION • NEW BRITAIN, CONNECTICUT

▲ For more details circle NED-319 J9 on enclosed inquiry slip ▲

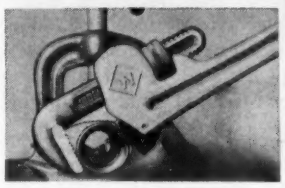
METAL FILM RESISTORS resistances range to 1 megohm



New sizes have been added to line of metal film precision resistors which now consists of seven sizes and cylindrical, semicylindrical, and rectangular styles. Prices have been reduced to make these units competitive with company's precision wirewound resistors. Resistance range is up to 1 megohm. Most sizes are rated ½ w at 125° C and ¼ w at 150° C. Largest units are rated 1 and ½ w at these temperatures. They consist of a thin film of metal alloy permanently bonded to glass and are sealed in a heat resistant plastic case. Made by **Ohmite Mfg. Co.**, 3625 Howard St., Skokie, Ill.

▲ For more details circle NED-321 J9 on enclosed inquiry slip ▲

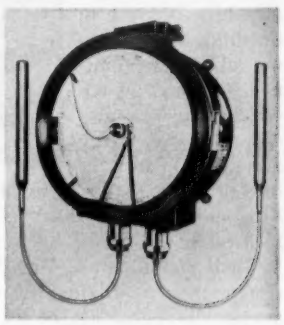
PIPE WRENCH self-adjusting type will not slip



Sliding lower jaw of this self-adjusting pipe wrench automatically tightens its grip as more force is applied. It will not slip, yet instantly releases on the backstroke for quick removal in close quarters. In its extended position, the lower jaw gives increased leverage and a positive grip on irregular shapes. Sizes from 10 to 24 in. are offered by **Wheeler Mfg. Corp.**, Ross Road, Ashtabula, Ohio.

▲ For more details circle NED-322 J9 on enclosed inquiry slip ▲

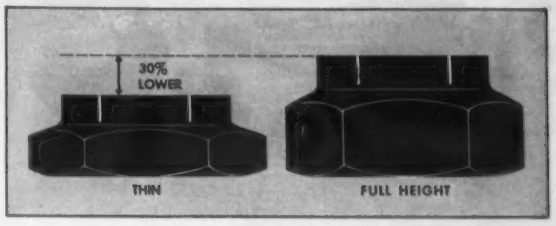
RECORDING THERMOMETER dual unit records up to 1100° F



Two thermal sensing elements and two pen mechanisms in the same body enable the TRH dual recording thermometer to sense and record temperatures up to a 1100° F limit simultaneously in two locations. Suited for critical analysis of process temperatures, its pens operate on a 2-hr differential in case both sensed temperatures happen to be the same. Electric or spring-driven chart drives and 10-in. chart diameter are offered. Mechanism is enclosed in a dust-tight case. The red ink used is noncongealing. Ten scale ranges are offered. Made by **Partlow Corp.**, 525 Campion Rd., New Hartford, N. Y.

▲ For more details circle NED-323 J9 on enclosed inquiry slip ▲

FLEXLOC thin nuts save weight, space, production time



FLEXLOC self-locking thin nuts are 30% lower—and correspondingly lighter—than full-height locknuts. They lock with shorter bolts; fit in spaces where ordinary locknuts will not go; help you design more compact bolted joints. They speed production, because fewer turns are needed to seat them.

Despite their reduced height, FLEXLOC thin nuts provide high locking reliability. This is because in a FLEXLOC every thread, including those in the locking section, carries a full share of the tensile load. And because FLEXLOCs require no auxiliary locking devices, they facilitate design and specification, simplify inventory, save steps in assembly. They also save on maintenance, because they can be reused repeatedly. See your SPS distributor or write direct for new Bulletin 866.

INDUSTRIAL FASTENER Division SPS

JENKINTOWN 24, PENNSYLVANIA

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SONO-GRIP!

Sono-Grip—the non-skid surfacing—is applied like paint to walkways, steps, and other slippery areas to prevent costly, painful accidents. It is applied with a brush, over painted or unpainted surfaces, indoors or outdoors. Resistant to oil, grease and many acids. Provides sure footing on smooth, dry, wet or oily surfaces. Comes in attractive safety colors: Red, green, yellow, and gray!

A Product of Sonneborn RESEARCH

For over 50 years manufacturers of quality building products

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404 Park Avenue South, New York 16, N. Y.

☐ Yes, I would welcome full particulars on Sono-Grip.
☐ Please see that I receive your Building Maintenance and Construction Handbook, 1959 Edition, with 128 pages of important information.

Name.....
Company.....
Address.....
City..... State.....

▲ For more details circle NED-325 J9 on enclosed inquiry slip ▲

APPLETON®

UNI-SEAL Rigid Conduit HUB

Patent Pending

Unparalleled ease of installation and positive liquid-tight, dust-proof protection are built right into this new APPLETON *Uni-Seal Hub*. An exclusive wedge adapter pulls up tight in the knock-out hole to give a lasting metal-to-metal "cold-weld" seal with full assurance of a perfect ground. Lasting resistance to vibration! Maximum wiring room because wedge adapter tightens down almost flush inside box! Insulated throat to protect wiring! Single wrench installation! So . . . for cost-cutting wiring installation, specify APPLETON UNI-SEAL Rigid Conduit Hub!

Sold Through Franchised Distributors Only

APPLETON ELECTRIC CO., 1701 Wellington Ave., Chicago 13, Ill.

Also Manufacturers of:

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NEW CHAMPION®

high production expanding mandrel

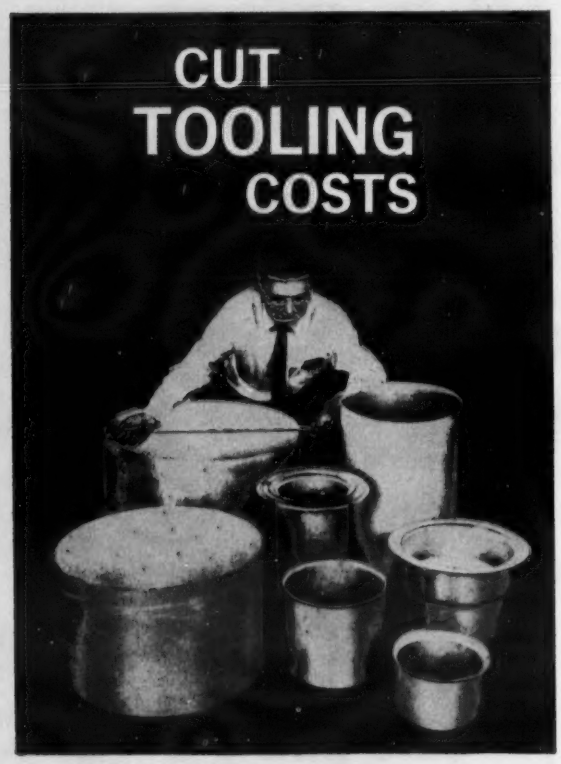
"Lok-Tite" series expanding mandrels with quick-taper design give automatic release of workpiece. They are used between centers, chucked, face plate or rotary table mounted. Threaded nut or drawbar clamped. Precision of .0004" T.I.R. is guaranteed. Twelve arbors with a wide range of sleeves will handle all holes from ½" to 15" I.D.

Send for free catalog giving complete line, specifications and prices

THE WESTERN TOOL & MANUFACTURING CO., INC.
SPRINGFIELD, OHIO FAIRFAX 3-9151

▲ For more details circle NED-326 J9 on enclosed inquiry slip ▲

CUT TOOLING COSTS



Let Us Supply You With Drawn Aluminum Shells

Alcoa's Jobbing Division is already tooled up to supply drawn aluminum shells. They are available on quotation in various wall thicknesses and alloys, in heights up to 23 in., and with diameters up to 48 in. And this is where you can save important money on production and avoid expensive tool and die installations. When you turn the complete job over to Alcoa, it is started sooner and completed faster. You eliminate costly overtime and production headaches. And best of all, you can rely on Alcoa's years of experience for quality work.

FREE TO MANUFACTURERS: Descriptive booklet. In addition to such "standard" items as drawn aluminum shells, Alcoa's Jobbing Division has the world's finest fabricating facilities for **subcontracting** to your order aluminum components for anything you make. A 16-page, free booklet describes how these facilities can save tooling costs, lighten your production load and generally cost you **less** than if you shouldered the whole job yourself. For your copy, write or mail the coupon.

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Your Guide to the Best in Aluminum Value

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Please send my free copy of *Alcoa Aluminum Fabricating Facilities.*

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STREET ADDRESS _____
CITY _____ ZONE _____ STATE _____

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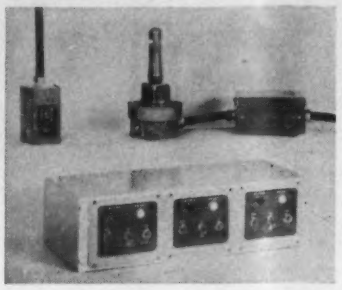
RADAR MOTION INDICATOR
detects, measures remote movements at distances to thousands of feet

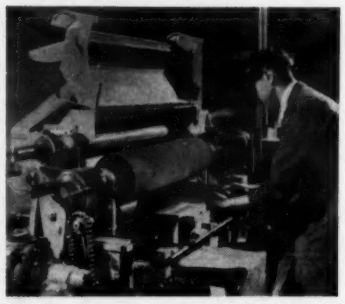


Any motion in or intrusion into an area under surveillance by the Standard Wave Area Motion Indicator (Swami) is instantly detected by the radar-like device and an alarm is sounded. Sensor of the miniature unit contains an ultra-high frequency radio oscillator pulsed at a low frequency repetition rate. Motion induces a change in this repetition rate, causing a central control station to touch off an alarm.

Small enough to fit into an attache case, the shock resistant device is virtually impossible to confound with countermeasures. Tampering with the connecting cable leading from sensor to monitor will actuate the alarm. Sensor power source may be a 115-v outlet, or any type of battery with sufficient power. Applications include protection of restricted areas, determination of speed, and burglar alarm. Effective range is from a few inches to several thousand feet. Normally omnidirectional, it can be focused with auxiliary equipment. Made by **Singer Mfg. Co.**, Singer Military Products Div., 149 Broadway, New York, N. Y.

▲ For more details circle NED-328 J9 on enclosed inquiry slip ▲

ABRASIVE WHEELS & ROLLS
nonwoven nylon fiber types for finishing and polishing work



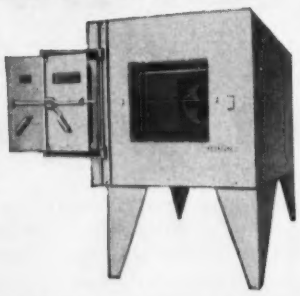
Bear wheels and rolls made of nonwoven nylon fiber with abrasive grain dispersed throughout show promise in finishing and polishing of metals, plastics, rubber, and wood. They can also be used to create decorative straight-line or swirl patterns, to impose matte finishes where high gloss or reflectance is undesirable, and to clean off oxides.

Their action can be varied by changing the type and size of grit, modifying the resins used, altering wheel density, varying rate of oscillation, or changing pressures and speeds. All normal diameters in face widths up to 60 in. and in grit range from 100 to 600 are offered. Wheels are run most efficiently at about 2600 sfpm and under light pressures. Photo shows a 38-in. wide roll used to polish copper sheet. Made by **Behr-Manning Co.**, Drawer 808, Troy, N. Y.

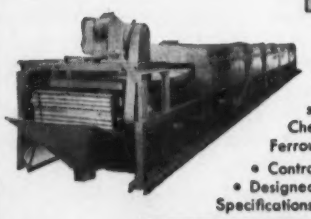
▲ For more details circle NED-329 J9 on enclosed inquiry slip ▲

ELECTRIC FURNACES

Uniform, *Controlled* Heat to 2700°



ANNEALING FURNACES specially designed for Glass and Steel applications in production and laboratory. Temperature range up to 1400°F.



CONVEYOR FURNACES for Glass Annealing, Baking Resistors, Ceramic Molding, Chemical Drying, Annealing Ferrous and Non-Ferrous Metals.

• Controlled Heat up to 1850°F.!
• Designed and Built to Your Specifications!

WRITE FOR BULLETIN 75-TC.

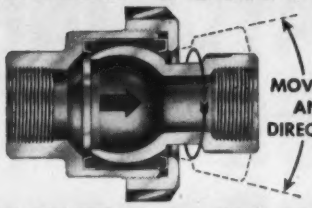
TRENT INC.

Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILADELPHIA 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

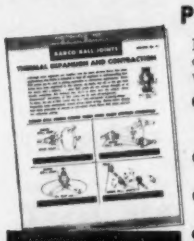
▲ For more details circle NED-330 J9 on enclosed inquiry slip ▲

BARCO *Flexible* BALL JOINTS

NOW! An easy way to solve



PIPE EXPANSION PROBLEMS



Send for New Bulletin No. 31

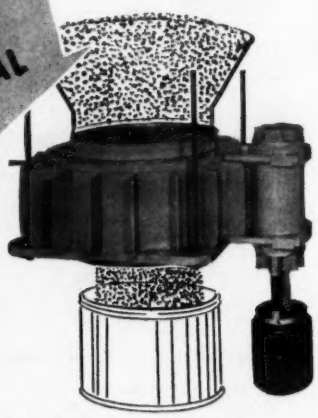
Barco Flexible Ball Joints make it easy and economical for you to solve many problems where piping EXPANDS and CONTRACTS!

- **No heavy pipe anchoring required. No "end thrust" developed under pressure. Minimum space needed.**
- **Ability to handle compound movement where twisting is also involved.**
- **Virtually no deterioration. Able to stay in service for years. No lubrication.**
- **Maximum safety for high temperature and pressure. Sizes ¼" to 12".**

Read interesting Bulletin 31, "How to Solve Piping Flexibility Problems". Complete with piping layout drawings and illustrations. Shows how to cut costs, save time, and do a better job! *Ask for recommendations.* BARCO MFG. CO., 530K Hough St., Barrington, Illinois.

▲ For more details circle NED-331 J9 on enclosed inquiry slip ▲

START HERE TO GET RID OF THE IRON IN DRY MATERIAL



FRANTZ FERRO FILTER® MAGNETIC SEPARATOR

An extremely simple but highly effective method of extracting iron particles from powdered and granular materials that you manufacture, buy, sell, or use in processing. Made in two sizes with capacities from 1 to 25 tons per hour depending on the nature of the material. Other FERROFILTERS available for handling liquids and slurries.

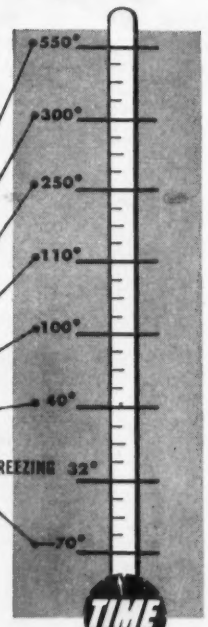
Send for BULLETIN 56-E

S. G. FRANTZ CO., Inc.
Brunswick Pike & Kline Ave.
P. O. Box 1138 Trenton 6, N. J.

▲ For more details circle NED-332 J9 on enclosed inquiry slip ▲

TIME HI-TEMP TAPES

+550° to —70° F



TIME HI-TEMP TAPES are remarkably exposure resistant to normal or extreme atmospheric conditions even when subjected to testing equipment simulating these effects.

Ideally suited for testing in

- OVENS
- STERILIZERS
- AUTOCLAVES
- INCUBATORS
- WATER BATHS
- REFRIGERATORS
- SUB-ZERO CABINETS

TIME HI-TEMP TAPES are completely unaffected by heat, steam, cold or freezing temperatures, acids or alkalies, moisture or oxidation.

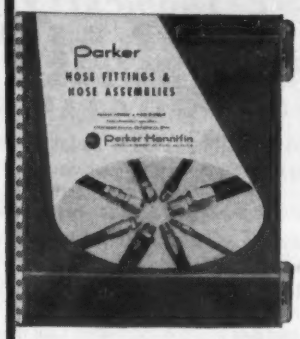
Can be imprinted with your message. For sample and prices write to Dept. 59I.

TIME SELF-STICKING LABELS

PROFESSIONAL TAPE CO., INC.
355 BURLINGTON RD. • RIVERSIDE, ILL.

▲ For more details circle NED-333 J9 on enclosed inquiry slip ▲

Hose and hose fittings are easy to select from this 72-page Parker Catalog



It's easy to choose the best Parker Hose and Parker Hose Fittings to handle practically any gas from air to freon, practically any liquid from water to synthetic hydraulic fluids from the data, specs, and recommendations in the complete Parker Hose Fittings and Hose Catalog 4400. Also includes useful information on assembling both standard and Parker "no-skive" Hoze-Lok Fittings to 15 types of Parker Hose.

Your Parker Hose Fittings and Hose distributor, listed in the Yellow Pages, can furnish you a copy. Or write . . .

Parker FITTINGS AND HOSE DIVISION
17325 Euclid Avenue • Cleveland 12, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

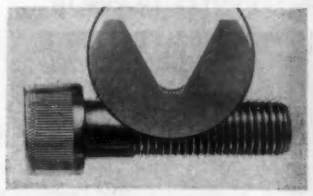
▲ For more details circle NED-334 J9 on enclosed inquiry slip ▲

PLASTIC TOTE BOXES
16 x 26-in. size in two depths

Resistant to most cutting oils, acids, and lubricants, Style 657 tote boxes will nest without wedging when not in use, or they can be cross stacked. They are made from U. S. Royalite, an industrial plastic that will not crack, chip, or dent. Easy to clean, lightweight boxes fit standard racks and handling carts. Sizes offered are 16 x 26 in., either 6 or 8 in. deep. Made by **Hollywood Plastics, Inc.**, 515 E. Ninth St., Los Angeles 15, Calif.

▲ For more details circle NED-337 J9 on enclosed inquiry slip ▲

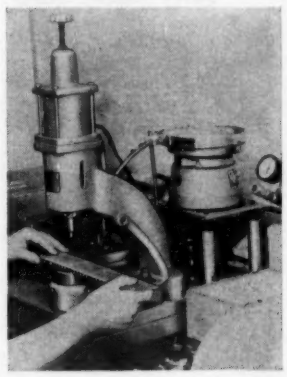
CAP SCREWS
round thread root doubles load life



Fatigue life under dynamic loading is doubled in Hi-Life Unbrako socket head cap screws by the smoothly radiused root form. Slightly more metal at this point of minimum cross-section boosts the usable static tensile of the screw by as much as 2½ per cent. Screws are used for various precision fastening applications including machine tools, dies, appliances, and mechanical equipment. The rounded root is now standard at no extra cost on all Unbrako socket head cap screws in diameter sizes ranging from No. 4 to 1½ in. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

▲ For more details circle NED-338 J9 on enclosed inquiry slip ▲

ELECTRIC TERMINAL STAKER
machine handles 115 parts per min



Up to 115 solder terminals per minute are positioned and staked in perforated panels by the Cambion vibratory-feed staking machine. Smooth, rapid feeding without damage to lugs or terminals is assured by the variable speed feeder bowl. Machine allows accurate lugging of flat panels with throat lengths of 3 in. or under. Impact velocity control knob assures constant peening results. The bench model staker operates on 115-v ac and is portable. Machines for contoured or deeper throat panels can be custom engineered. Made by **Cambridge Thermionic Corp.**, 445 Concord Ave., Cambridge 38, Mass.

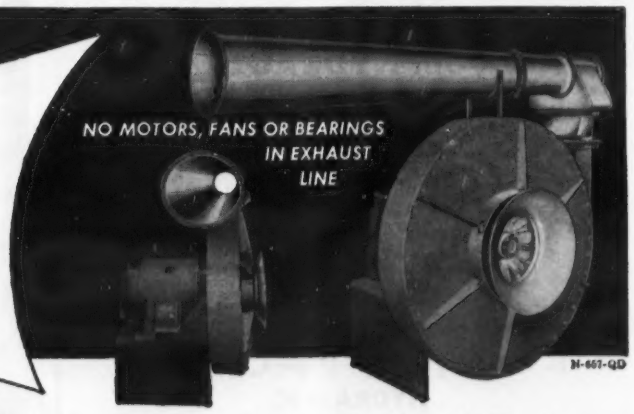
▲ For more details circle NED-339 J9 on enclosed inquiry slip ▲

ACCURATE MFG. COMPANY
Garfield, New Jersey

▲ For more details circle NED-335 J9 on enclosed inquiry slip ▲

Now . . .

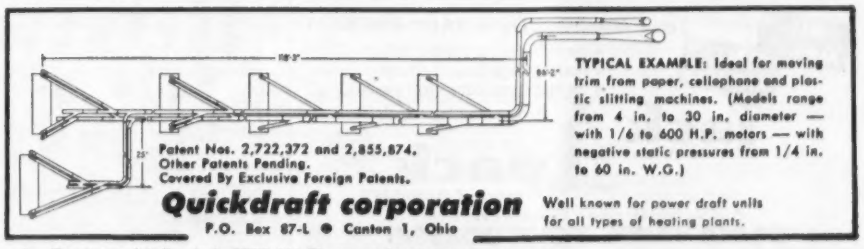
you can reduce bulk materials handling costs with *Quickdraft* high pressure exhausters



FOR MOVING:
Cement, Sand, Iron Oxide, Wheat, Corn, Salt, Limestone, Castor Beans, Knots, Blocks, Paper, Wool, Cotton, Oats, Rags, Rubber, Vegetables, Coal (Powdered), Shavings, Cork, Sawdust . . . **and any other materials that can be moved by air!**

IMPORTANT NOTICE
For resisting abrasive action, Quickdraft units can be rubber lined. For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (PVC), and with plastic and Fiberglas coatings.

Time and maintenance savings usually pay for Quickdraft high-pressure exhausters in 6 to 18 months on materials handling jobs. Because material does not pass through blower, maintenance is negligible. Downtime for cleaning and replacing fans, motors and bearings is eliminated. Quickdraft units are also ideal for exhausting paint spray, abrasives, corrosive gases, noxious fumes and high temperatures. For Quickdraft engineering data on materials handling, industrial exhausting, heating plant venting, write today!

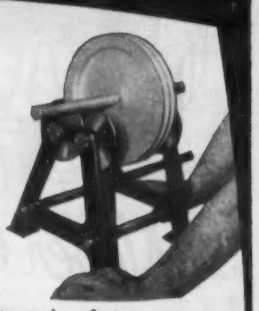


Quickdraft corporation
P.O. Box 87-L • Canton 1, Ohio

▲ For more details circle NED-336 J9 on enclosed inquiry slip ▲

Balance Rotating Parts FASTER . . . EASIER

USE *Anderson* BALANCING WAYS



Static-balance rotating parts easier, faster, more accurately with *supersensitive* Anderson Balancing Ways. No setup, no leveling, no centering. Chilled iron discs, ground and balanced to extreme accuracy, rotate with minimum friction on special precision bearings. Glass-hard spindles and bearings prevent wear or ball-bearing indentations when balancing heavy work. Superior accuracy lasts throughout long life. Proved and preferred over 40 years.

Write for Bulletin No. 9-40
ANDERSON BROS. MFG. CO.
Rockford, Ill.

▲ For more details circle NED-340 J9 on enclosed inquiry slip ▲

THE FIRST LIQUID HARDENER EVER MADE FOR CONCRETE FLOORS

To give hardness-in-depth!

LAPIDOLITH

Not a coating
Not a film . . . but a hardener that acts below the surface to become an integral part of the concrete floor

a product of SONNEBORN Research

Mail Coupon today for money-saving features and the BONDED GUARANTEE

L. SONNEBORN SONS, INC.
Building Products Division—Dept. N-99
404 Park Avenue South, New York 16, N. Y.

☐ Send complete information on LAPIDOLITH and the BONDED GUARANTEE.
☐ Also include free copy of 128 page Building Construction and Maintenance Handbook.

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-341 J9 on enclosed inquiry slip ▲

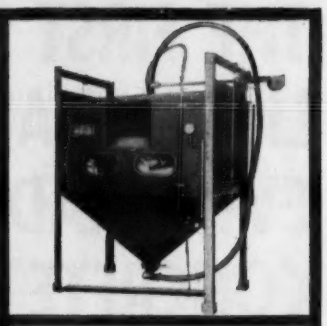
AERO-SEAL JET Hose Clamps have a thousand and one shop and maintenance uses for fastening hose, pipe, tubing and other clamping needs. Made of 302-18-8 stainless steel alloy, they last longer. Bands won't corrode. A few turns of the precision worm gear and they're tightly attached for keeps. Yet they can be removed in a jiffy and re-used over and over. Ask your supplier for genuine AERO-SEALS — Jet or regular.

Aero-Seal JET
QUICK-ATTACH HOSE CLAMPS

BREEZE CORPORATIONS, INC. 700 LIBERTY AVENUE UNION, N. J.

▲ For more details circle NED-343 J9 on enclosed inquiry slip ▲

For fast cleaning of small work . . .



The Pangborn Air Blast Cleaning Cabinet was designed for production or maintenance . . . adaptable for sand or metal abrasives. Perfect for small or intermittent jobs! Cleans quickly and thoroughly, operates economically and safely. Shipped fully assembled.

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md. *Manufacturers of Blast Cleaning and Dust Control Equipment and Rotoblast® Steel Shot and Grit.*

Pangborn
BLAST CLEANS CHEAPER

▲ For more details circle NED-344 J9 on enclosed inquiry slip ▲

Low-cost SPRAY OUTFIT makes short work of small paint jobs around the plant

Now you can complete those one- and two-hour paint jobs in a matter of minutes with the low-cost, highly portable DeVilbiss Tuffy Spray Outfit.

Tuffy outfit plugs in anywhere; takes the high cost out of painting machinery, gratings, grilles; ideal for touch-up and service jobs.

Complete outfit includes rugged compressor, built of heavy-gauge steel, mounted on rigid steel base; spray gun with cup; and 12′ air hose. Available with or without 1/3-hp motor.

Write for details.

THE DEVILBISS COMPANY
Toledo 1, Ohio
Branch Offices in Principal Cities

DEVILBISS

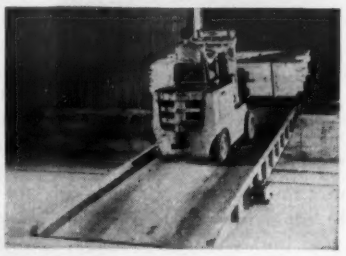
▲ For more details circle NED-345 J9 on enclosed inquiry slip ▲

PRESSURE LOCK WRENCH manipulated with one hand

Handled easily with only one hand, this BMC pressure lock wrench can be adjusted for a "feather-hold" or a 1-ton vise - like grip. Tool can serve as an adjustable pipe or end wrench, straight-duty or ratchet-action pliers, portable hand vise, and cable-and-guy wire clamp. Desired jaw opening is obtained by turning nut with thumb and finger of hand holding the tool. Calibrated scale shows gripping space. Tool is made of high carbon steel with heat treated jaws and crack-resistant Tenite handle. Made by **Fem Tool & Die Co.**, 13417 S. Halsted St., Chicago 27, Ill.

▲ For more details circle NED-346 J9 on enclosed inquiry slip ▲

STEEL YARD RAMP wheel mounted, supports 15,000 lb



All - steel Lifetime yard ramp with 15,000-lb load capacity is rolled into position on 16-in. rubber-tired wheels which are raised and lowered hydraulically. Overall lengths from 25 to 36 ft are available. Decks are 70 in. wide and have checkered steel plate riding surface for optimum traction. Stringers prevent trucks from running off the sides. Made by **Elizabeth Iron Works, Inc.**, Box 360, Elizabeth, N. J.

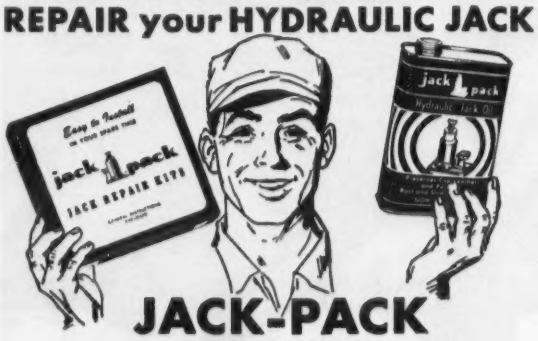
▲ For more details circle NED-347 J9 on enclosed inquiry slip ▲

SIGNAL BELLS offered in four sizes

By utilizing the full vibration output of the gong shell, N-Co-Bells have a high decibel rating, yet have a controlled low frequency stroke. Low amperage drain permits use of additional units on existing power supplies for fire protection and industrial use. Bell size can be changed by taking off one gong shell and replacing it with a smaller or larger size. All parts are plated for corrosion protection and coils have heavy insulation. Of underdome design, bells are offered in 6, 8, 10, and 12-in. shell sizes for all standard alternating and direct current voltages. Made by **Notifier Corp.**, 3700 N. 56th St., Lincoln 4, Nebr.

▲ For more details circle NED-348 J9 on enclosed inquiry slip ▲

Here's ALL YOU NEED to REPAIR your HYDRAULIC JACK!



JACK-PACK
HYDRAULIC
JACK REPAIR KITS & JACK OIL

JACK-PACK repair kits contain easy-to-follow instructions and all the packings necessary to make your jack work like new. And, be sure to use JACK-PACK hydraulic jack oil. It's the only oil with complete instructions for filling and bleeding your jack on the can.

ALL MAKES ALL MODELS

Save Money . . . Try a JACK-PACK!
- No more big jack repair bills.
- No more high freight charges.
- No more long equipment tie-ups.

Write today for free folder.

jack pack MFG. COMPANY
2115 No. Marianna Ave., Los Angeles 32, Calif.

ORDER FROM YOUR JOBBER!

▲ For more details circle NED-349 J9 on enclosed inquiry slip ▲

SHUT OUT RUST CATHODICALLY!
USE DRYGALV ZINC COATING

DRYGALV coating is 95% metallic zinc:
- stops rust on iron and steel—**permanently**
- stops corrosion at welded joints—**permanently**
- repairs damaged galvanized surfaces—**permanently**

Use DRYGALV and end rust worries for good! Only a minimum of surface preparation is necessary. DRYGALV can be applied over rust, partially painted surfaces or clean metal. It dries to the touch in 15-30 minutes, can be painted over in only 8 hours where color is desired. DRYGALV is non-toxic; protects against the effects of sea water. *It is applied by brush or spray.*

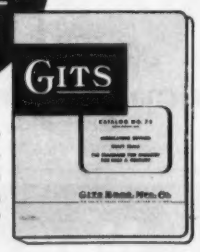
PROTECT with DRYGALV!

Write, wire or call for other details and prices today.

AMERICAN SOLDER & FLUX CO.
19th & WILLARD STREETS,
PHILADELPHIA 40, PA.
phone: BA6-1800

▲ For more details circle NED-350 J9 on enclosed inquiry slip ▲

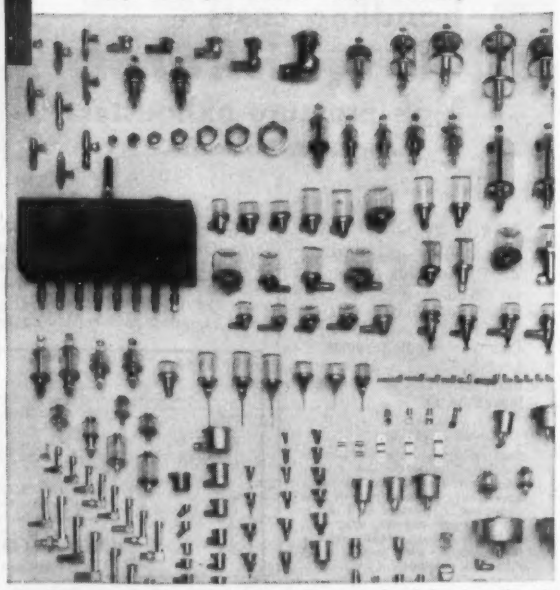
523 GITS OILERS AND GAUGES READY TO SHIP



Largest selection available anywhere. You save time and money, because the one you want is always right in stock. Send for complete Catalog.

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. Chicago 23, Ill.

Specialists in Lubricating Devices and Shaft Seals for Almost Half-A-Century



▲ For more details circle NED-351 J9 on enclosed inquiry slip ▲

SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

SKIL Top-handle Saw features EXCLUSIVE SAFETY GUARD

Top protection at all times. "Floating" upper guard rotates forward as cutting depth is increased. Gives maximum blade coverage on every cut. Special satin finish on handles for sure-grip. "Vari-Torque" clutch prevents kick-back. Many more features in all-new SKILSAW.

- Ultra-high 7000 rpm blade speed.
- Extra-powerful 2 HP motor.
- Superior top-handle design balances saw perfectly in-the-hand. Easy "swing-through" on end cuts.
- Exclusive blade-change lock permits easy, fast blade changes.
- All ball-bearing construction.
- Available in two sizes—7¼" Model 857 and 8¼" Model 858.

Ask your local SKIL distributor for a no-obligation Proof Test of the all-new top-handle saw with the exclusive safety features.

SKIL

Made only by SKIL Corporation, manufacturer of famous SKIL and SKILSAW products, Chicago 30, Illinois. In Canada: 3601 Dundas Street W., Toronto 9, Ontario.

▲ For more details circle NED-352 J9 on enclosed inquiry slip ▲

SPITFIRE Grinding Discs

GREATER SAFETY MARGIN! Revolutionary new Aluminum Oxide Discs feature built-in barrier protection plus fully reinforced edges to eliminate limpness and excessive grit loss. Spitfire Discs provide 25% greater safety margin on "snagging" and "hang up" operations.

FASTER, COOLER CUTTING! Sharp, uniform cutting action makes full use of disc surface . . . speeds up grinding and sanding even under toughest conditions. Cooler running to add extra life, longer production performance.

A TYPE AND SIZE FOR EVERY JOB! Available in "Special," "Standard" and "Heavy Duty" discs for everything from light gauge metal sanding and polishing to high speed finishing operations. Grit sizes 16 through 180. Disc diameters include 6", 7", 8" and 9⅛" with ½" and ⅞" arbor holes.

Write for "Spitfire" folder!

JEWEL BRAND

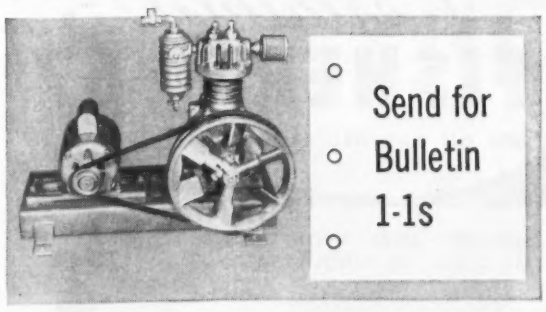
COATED ABRASIVES

Belts • Rolls • Sheets • Discs • Specialties

ABRASIVE PRODUCTS, INC.
South Braintree 85, Massachusetts

▲ For more details circle NED-353 J9 on enclosed inquiry slip ▲

Compact compressor package provides low-cost, oil-free air



Pure air—free from oil or other contamination—is delivered by the Gardner-Denver CACB compressor. Self-lubricating carbon pistons and piston rings eliminate need for any oil or water lubricant in the air chamber. A single-stage, air-cooled machine, the CACB supplies four to five cu ft of air per minute . . . is suitable for discharge pressures of 40 to 100 psi. Available as a bare compressor or complete tank-mounted unit.

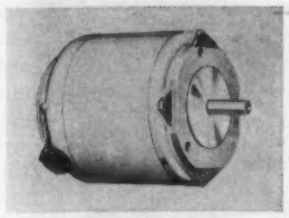
EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-354 J9 on enclosed inquiry slip ▲

SYNCHRONOUS MOTOR operates at 72 rpm on 60 cycles



Instant starting, stopping, and reversing control are provided by a single-pole three - position switch of the Slo-Syn, an enclosed permanent magnet type synchronous motor with only three leads. No additional starting means or braking are needed. At 60 cycles its speed accurately remains at 72 rpm. Conservative torque rating is 150 oz-in. When used as a stepping or inching motor, direct current impulses are converted into either 200 or 400 precise increments of one motor shaft revolution. Suited for servomechanisms, automatic machines, remote control, and numerical control systems, the motor has a rated input of 120 v, 40/70 cycles, single-phase. Made by **Superior Electric Co.**, Dept. SS, 83 Laurel St., Bristol, Conn.

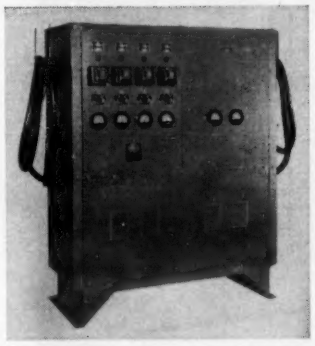
▲ For more details circle NED-355 J9 on enclosed inquiry slip ▲

THERMOCOUPLE CONNECTOR miniature unit withstands 1000° F

Five, nine, and eleven-contact configurations are available in this line of thermocouple connectors which have a 1¼-in. OD shell. Their ceramic inserts withstand temperatures up to 1000° F. The miniature connectors have pins and sockets of chromel, alumel, copper, constantan, and iron for welded, soldered, or brazed connections up to No. 14 wire. Made by **Harco Laboratories, Inc.**, 77 Olive St., New Haven, Conn.

▲ For more details circle NED-356 J9 on enclosed inquiry slip ▲

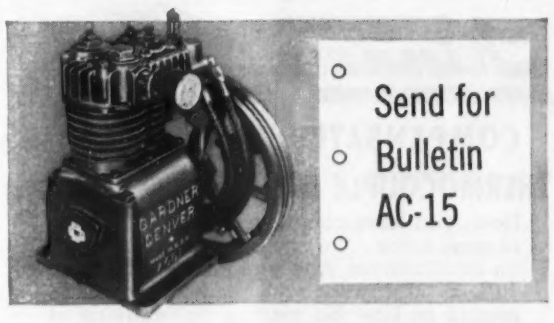
TRUCK BATTERY CHARGER 3 to 15-kw generator capacities



Four-circuit automatic Portapak industrial truck battery charger has a temperature compensated voltage relay that senses the battery voltage at about 2.37 v per cell, or when the battery is three-fourths charged. A relay then cuts in a time clock for the final 3 hr of charging. When the last battery on charge is shut off, the charger shuts down. Unit charges lead-acid batteries in 8 hr or less, and nickel-alkaline batteries in 7 hr. Generator capacities from 3 to 15 kw are offered. Made by **Motor Generator Corp.**, W. Water Street, Troy, Ohio.

▲ For more details circle NED-357 J9 on enclosed inquiry slip ▲

Designed to outlast any other small compressor



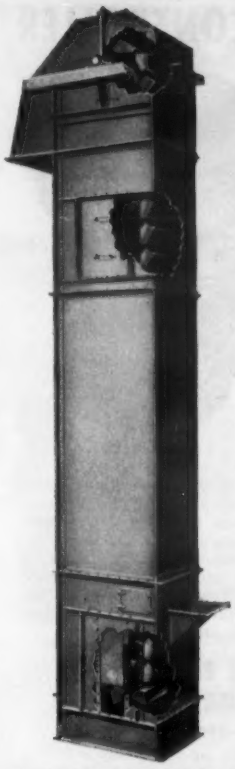
Small, rugged and compact, the Gardner-Denver ADD is a dependable, duplex, two-stage compressor. Quality design provides adjustable roller main bearings on both ends of crankshaft . . . circumferential cooling fins give more efficient cooling . . . valves are in separate compartments . . . all parts are engineered for easy accessibility. Variety of controls available—automatic start and stop, constant speed, or combination of both. Rated at 25 cfm displacement.

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-358 J9 on enclosed inquiry slip ▲



Cement Mill Elevators...

15 to 470 tons per hour

Removable split hood for easy access to head section.

Sealed heavy-duty antifriction bearings entirely outside of casing with dust seals around the head shaft.

Dust-tight and weather-proof 10-gauge steel casing with reinforced corners. Ample clearance between buckets and casing.

Increased capacity by closer bucket spacing. Lips and sides of buckets reinforced.

Equipped with heavy-duty steel knuckle chain assuring long life.

Large access doors for easy inspection and maintenance.

Cleanout doors at front and rear of casing.

Send now for Bulletin 950, or place a call for engineering assistance to The Jeffrey Manufacturing Company, 952 North Fourth St., Columbus 16, Ohio.

JEFFREY

▲ For more details circle NED-359 J9 on enclosed inquiry slip ▲

64 SIZES KRAFT CARTONS READY FOR SHIPPING

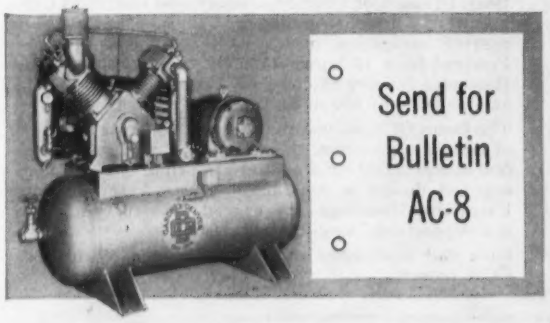
ESTABLISHED 1893 Campbell

QUALITY PACKAGING SINCE 1893

CAMPBELL BOX & TAG CO.
DIVISION OF STONE CONTAINER CORPORATION
MAIN & NEW STREETS SOUTH BEND 23, INDIANA

▲ For more details circle NED-360 J9 on enclosed inquiry slip ▲

Plus value compressor outfit displaces 100 cfm at 125 psi



The Gardner-Denver ADL is one of the highest capacity tank-mounted compressor outfits available. It's a two-stage, air-cooled, 20 hp, two-cylinder unit. The ADL often provides all the air you need without adding a more expensive type of installation. In continuous service, it has a piston displacement of 100 cfm at 870 rpm. Discharge pressure up to 125 psi, or as high as 250 psi on intermittent service. Compressor alone also available.

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

▲ For more details circle NED-361 J9 on enclosed inquiry slip ▲

MICRO DELTA p CONTROLLER

provides back pressure control in LESS THAN A SECOND!

SERIES 4000

When overshooting the control point is objectionable or intolerable, IEC's Micro Delta p Controller will restore accurate, stable back pressure control—*within a fraction of a second!*

This compact "packaged" system—pressure sensing element and control valve—requires only *one-fourth* the space of a conventional air controller and diaphragm valve. Cost, in many cases, is less than that of a control valve alone.

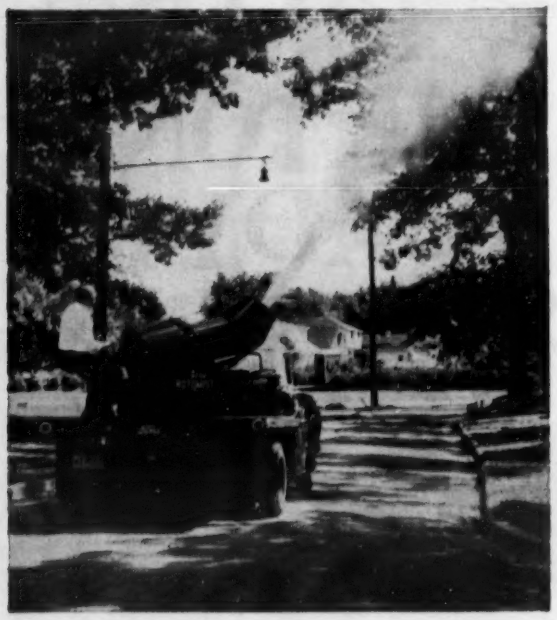
The Micro Delta p's speed of response—*without hunting*—makes possible the use of multiple control points with minimum transient time. It also features square-wave pressure response and constant pressure throughout full pressure range.

Available now in five types for a wide range of pressure and flow conditions. Write for Bulletin 544 for complete details and prices.

INDUSTRIAL ENGINEERING CORPORATION
530 E. Woodbine, Louisville 8, Kentucky
Designers, engineers, and manufacturers of hydraulic and electronic test equipment, consoles, panels, etc.

▲ For more details circle NED-362 J9 on enclosed inquiry slip ▲

Onan NEWS REPORT



Onan 13 H.P. engine powers 100-mile-an-hour air blast!

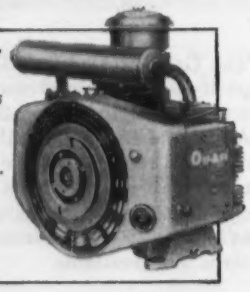
This Model 50 Rotomist, manufactured by the John Bean Division of Food Machinery and Chemical Corporation, is a highly mobile mist sprayer used for pest control, sanitation, and treatment of tree diseases. Powered by a 13 horsepower Onan CCK engine, the Rotomist delivers 12,000 cubic feet of air per minute at a velocity of 100 miles per hour.

The Onan CCK offers unique advantages for this type of mobile application. It is capable of *sustained operation at over 3,000 r.p.m.* Alternate-firing, two-cylinder, opposed design is compact and *free from vibration.* Extra-large bearings and rugged construction make it a dependable, long-life power source.

Give *your* equipment a performance *bonus* with Onan CCK power!

Onan Model CCK-Gasoline or gas-powered

- Over-square design; 3¼-inch bore; 3-inch stroke.
- Rotating Stellite-faced exhaust valves.
- Solid Stellite exhaust valve seats.
- Full pressure lubrication.
- Axial-flow cooling.
- Short, extra-heavy crankshaft.
- 3-quart oil sump.
- High tension magneto ignition.

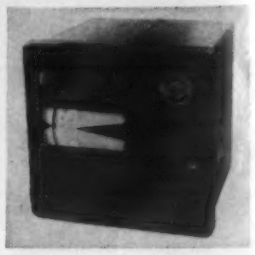


Call the Onan distributor listed in your telephone book or write for complete specifications.

D. W. ONAN & SONS INC.
ELECTRIC PLANTS GENERATORS ENGINES ENGINE-COMPRESSORS
3171 University Avenue S.E. • Minneapolis 14, Minnesota

▲ For more details circle NED-363 J9 on enclosed inquiry slip ▲

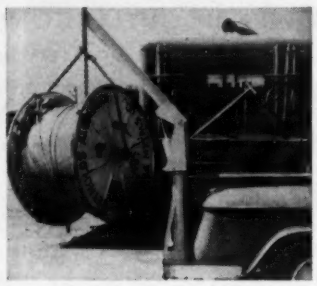
STRAIN GAGE INDICATOR for measuring and control systems



Weight and load measuring systems, pressure systems, and torque and horsepower measuring systems are among the applications for the SR-4 Type 12 disc indicator. Usable in measuring and control systems employing resistance strain gage transducers, the medium size instrument has a horizontal read-out window and up to 500 engraved dial graduations for accurate reading. Thirteen models are accurate within ±0.15 per cent of full scale. Announced by **Baldwin-Lima-Hamilton Corp.**, Electronics & Instrumentation Div., 42 Fourth Ave., Waltham 54, Mass.

▲ For more details circle NED-364 J9 on enclosed inquiry slip ▲

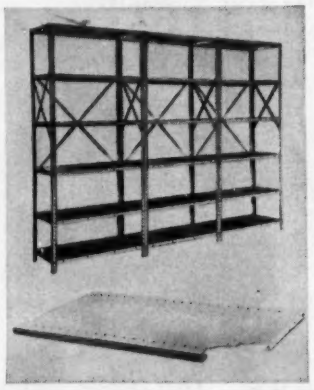
HAND-HYDRAULIC CRANE mounts on dolly or truck



Hand-operated hydraulic crane, available in 1500 and 2500-lb capacities, is interchangeable with dolly or truck mounting. One crane can be moved to serve several locations. Options include extension arms, barrel chains, appliance straps, inside or outside truck mounts, or dolly mount as required. All parts are easily replaced. Made by **Ideal Crane Co.**, Box 516, Suite 43, Wichita Falls, Tex.

▲ For more details circle NED-365 J9 on enclosed inquiry slip ▲

SHELVING has improved post construction

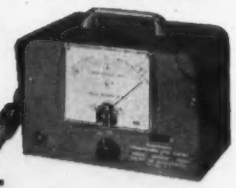


Improved shelving in widths from 24 through 48 in. and depths from 9 through 36 in. features double bend reinforcement of front and rear edges of each shelf. Holes are now punched on 1½ rather than 3-in. centers. Angle posts now have a 1-in. face and 1¾-in. leg for greater opening into shelving section. Posts are available in standard and heavy-duty gages in many heights up to 120 in. Baked enamel finish is applied electrostatically after phosphating for rust prevention. Made by **Frontier Mfg. Co.**, Box 13266, Dallas 20, Tex.

▲ For more details circle NED-366 J9 on enclosed inquiry slip ▲

Read Pressures from 3000 to 1 Micron QUICKER and MORE ACCURATELY

Kinney®



COMPENSATED THERMOCOUPLE GAGE

Now—you have complete interchangeability of gage tubes . . . no need to match tubes . . . no recalibration. And you have accuracy ± 10% at 50 microns with readings within ½ second or less. No waiting for warm-up of tubes, the KINNEY Compensated Thermocouple Gage gives you instantaneous reading from station to station.

- **Fast warm-up of control circuit . . . ready to read 3 seconds after unit is turned on.**
- **Complete interchangeability of gage tubes without recalibration of gage control circuit.**
- **Cable lengths up to 400 feet between tube and control circuit are allowable.**

Write for information on KINNEY Thermocouple and Ionization Gages

KINNEY MFG. DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612J WASHINGTON STREET • BOSTON 30 • MASS

▲ For more details circle NED-367 J9 on enclosed inquiry slip ▲

BOXES AND BASKETS

These economical steel containers are designed to carry parts on pallets, belts or overhead conveyors through all your production and assembly operations. They eliminate time-consuming transferals, even for degreasing. Stacked alongside of workers or hung in hopper racks, they provide ample supplies of parts in easy reach. Empty, they nest neatly out of the way. Nestier Boxes and Baskets are available in five convenient sizes, 12" to 36" in length. Write for information today. Dept. D-9.

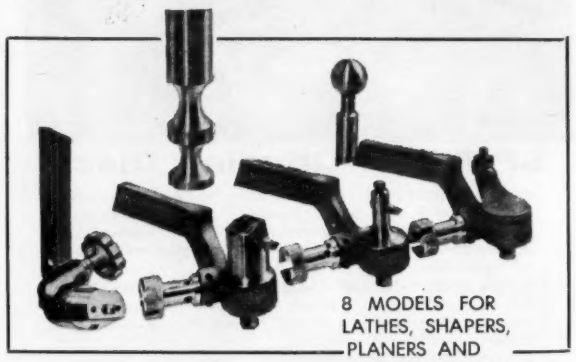
NESTIER — FIRST IN SMALL PARTS HANDLING

NESTIER CORPORATION Subsidiary of THE METAL SPECIALTY CO.
4519 Este Ave., Cincinnati 32, Ohio

▲ For more details circle NED-368 J9 on enclosed inquiry slip ▲

PRECISION

SHAPLANE RADIUS TOOLS



8 MODELS FOR LATHES, SHAPERS, PLANERS AND BORING MILLS . . . .

Range: ⅜" to 3" for concave radii on lathes. Two sizes for convex radii (Balls up to 2½" dia.) on lathes. Also heavy duty model for radii to 6" on planers, etc.

Write for Circular *Patent Pending*

C. B. TEETER, TOOL ROOM SPECIALTIES
3443 N. Greenview Ave., Chicago 13, Ill. Phone: DRexel 3-3571

▲ For more details circle NED-369 J9 on enclosed inquiry slip ▲

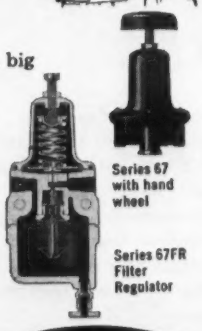
Certainly!

FISHER SERIES 67

are all purpose regulators

ENGINEERS AGREE UPON THIS SMALL VOLUME REGULATOR

- It's a small valve that does a big job . . . it's particularly suitable as an auxiliary operating pressure regulator for air or gas service. Five spring ranges are available, 5 to 20—5 to 35—30 to 60—55 to 100 psi. Also available with brass body for small volume water service.



WRITE FOR BULLETIN C-67C

FISHER Controls

FISHER GOVERNOR COMPANY
Marshalltown, Iowa / Woodstock, Ontario

▲ For more details circle NED-370 J9 on enclosed inquiry slip ▲

Here's the most

VERSATILE CRANE

you can buy!

THIS BROCHURE describes the full line, complete with all specifications.

Available in seven models, with capacities from one-half to three tons. Every Tubarcrane has a three-position built-in extension boom—no extras to buy! Pumping effort is easily adjustable. Tilt-back mast provides more area for lifting bulky loads. Write for literature today!

Jobber Territories Available

Also request literature on Tubar Hand Trucks, Platform Trucks, Tubarlifts

U-159-45

Tubar ASSURES QUALITY

SHRODER, INC. • DENNISON, OHIO

LIFTS • DUMPERS • CRANES

▲ For more details circle NED-371 J9 on enclosed inquiry slip ▲

NEW highly-versatile explosion-proof THERMOSTAT

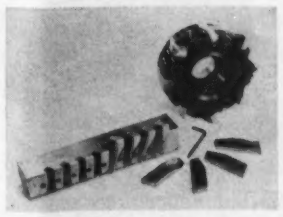
Simple to install in tank, wall, or contaminated environments, the new Fenwal Series 80016-4 THERMOSWITCH® Assembly provides instant response and precise control for hundreds of applications where explosive conditions exist.

Completely adjustable over ranges of 32 to 400°F, or 100 to 500°F, it can be undershot to −100°F for infinitely long periods, overshot to +100°F above its set point for brief periods. 3-pc. assembly includes: Series 47000 Cartridge Type THERMOSWITCH unit; stainless steel protective well with standard pipe threads for mounting purposes; explosion-proof junction box. Provides all the "regular" advantages of THERMOSWITCH units such as high sensitivity and load-carrying capacity, low thermal lag, smooth performance under shock and vibration. Rating: 10 amps, 115 VAC or 5 amps, 230 VAC. UL approved for Class 1, Group D areas. For further information write Fenwal Incorporated, 279 Pleasant Street, Ashland, Massachusetts.

ANOTHER EXAMPLE OF HOW Fenwal Controls Temperature ... Precisely

▲ For more details circle NED-372 J9 on enclosed inquiry slip ▲

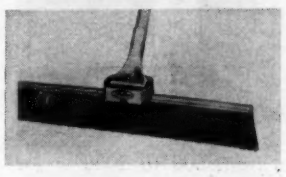
MILLING CUTTERS fixture simplifies blade sharpening



One size blade fits all Mill-Eze milling cutters which are available in diameters of 3½ to 8½ in. Cutters take from 6 to 14 blades, depending on diameter, and blades of Electrite-Dynavan steel or carbide tipped can be either right or left hand. Blades fit tightly in slots, backed by accurate height adjustable stop. Blades are easily removed for resharpening, can be replaced in cutter accurately within 0.0005 in., and are held securely without wedges or shoes. Blade sharpening fixture shown, offered in 6 to 14-blade sizes, facilitates sharpening all blades at one time on any surface grinder. Offered by **Smith Tool Sales Inc.**, 19333 James Couzens Highway, Detroit 35, Mich.

▲ For more details circle NED-374 J9 on enclosed inquiry slip ▲

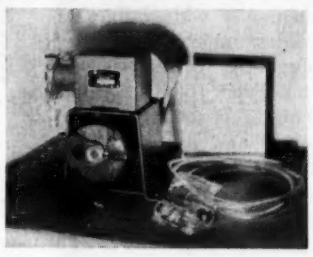
BROOM-SQUEEGEE spreads floor sealing compounds



Filaments of 0.020 - in. black crimped nylon are permanently anchored in a rust resistant steel strip of the Blade Sweep, a lightweight, flexible broom-squeegee. It will apply sealing compounds evenly on asphalt floors and drives and tarred roofs. Easily cleaned nylon filaments remain strong and resilient, even with continuous contact with chemicals and solvents. Made by **Fuller Brush Co.**, Industrial Products Div., Fuller Park, Hartford 15, Conn.

▲ For more details circle NED-375 J9 on enclosed inquiry slip ▲

CHEMICAL FEEDER has electric proportioning pump



Accurate, uniform proportions of chemical solutions, acids, and alkalies are fed to process liquids by this Model 1210 Proportioneers Chem-O-Feeder. It has a corrosion-resistant transparent plastic head, Hypalon diaphragm and check valves, and straight-through flow. Simplex, duplex, and triplex types have adjustable deliveries up to 12, 24, and 36 gph, respectively, with discharge pressures to 125 psi. These packaged units include feeder, motor, suction and discharge tubing, injection nozzle, foot valve, spare parts, and instructions. Prices start at $285. Made by **B-I-F Industries, Inc.**, 345 Harris Ave., Providence 1, R. I.

▲ For more details circle NED-376 J9 on enclosed inquiry slip ▲

NEW FREE BOOKLET

gives complete facts about Verifax Copying

- Explains *completely different* Kodak method which gives you 5 complete and accurate copies in 1 minute for 2½¢ each. Lists all the extras of Verifax Copying.
- Shows how all departments save with Verifax Copying, includes many valuable short cuts for boss and secretary.
- Describes complete line of Verifax Copiers priced from $99.50.

Write today for your free copy!

EASTMAN KODAK COMPANY
Business Photo Methods Division
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-377 J9 on enclosed inquiry slip ▲

THE CLEANING MACHINE THAT GOES ANYWHERE

Thousands of these handy Tornado Pac-Vacs are being used throughout industry today. Practically every mail brings word of some new cleaning operation being done by this versatile cleaner.

Pac-Vac is a powerful motor and impeller unit mounted on a comfortable pack frame. With a filter bag it is used as a vacuum cleaner. By changing the hose it becomes a powerful (325 mph) air sweeper or blower.

Buy several and keep them throughout your plant. They're available in ¾, 1 or 1½ H.P. motor units.

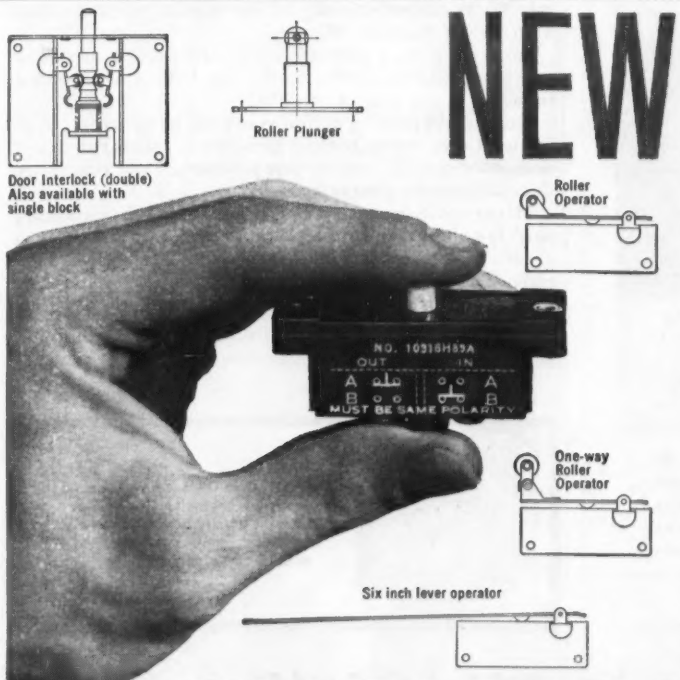
WRITE FOR BULLETIN #921 TODAY

BREUER ELECTRIC MFG. CO.

5116 N. Ravenswood Avenue, Chicago 40, Illinois

▲ For more details circle NED-378 J9 on enclosed inquiry slip ▲

NEW Industrial Duty Precision Switch



COMPACT ... *Contact blocks measure 2½" x ¾" x 1"*

FLEXIBLE ... *Choose from 39 ready-to-install units or combine contact blocks and operators to "custom-design" special purpose units*

DEPENDABLE ... *New heavy duty design and construction assures ten times greater electrical and mechanical life*

Cutler-Hammer 10316 Precision Switches are built better to last far longer. Be sure you have the new descriptive bulletin detailing important design features, dimensions, and ratings. Write today for Bulletin EM154-S251.
Cutler-Hammer Inc., Milwaukee 1, Wis.

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wis. • Division: Airborne Instruments Laboratory. • Subsidiary: Cutler-Hammer International, C. A.
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation.

▲ For more details circle NED-373 J9 on enclosed inquiry slip ▲

Get more for your electrical dollar with

McKINSTRY

NEMA Type 12 Panel Enclosures

Splash proof — oil and dust tight • Zinc coated to resist corrosion • Baked-on, white enamel interior • Grey zinc chromate exterior • Flanged box opening for extra strength • Made from bonderized sheet • Continuous welded seam • Continuous hinge • Panel mounted on studs for maximum open panel area.

Write Dept. 20-F for catalog and price list showing complete line of McKinstry Electrical Boxes, Panel Boards, Wireways and Fittings.

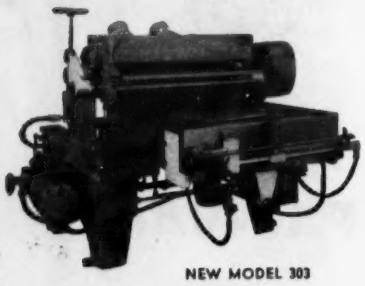
McKinstry Metal Works, Inc.
285 McKinstry Avenue
CHICOPEE, MASSACHUSETTS

▲ For more details circle NED-379 J9 on enclosed inquiry slip ▲

THE NEW 303 IS

Versatile

Available in four sizes — with many optional features. Work held either mechanically or by vacuum.



NEW MODEL 303

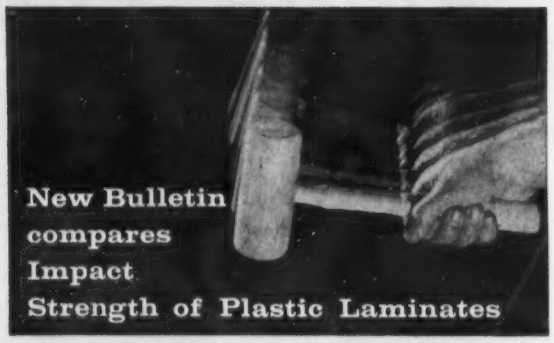
✓METALS
✓PLASTICS
✓WOODS

New single roll table type in four sizes. Hydraulic travel: in, out and sidewise. Delicate automatic counterbalancing assures sensitive floating action for flat or contoured surfaces. Quick-Change spindle. Max. floor space: 6' · 10" wide x 10' · 7" deep. Wt. approx. 6,000 lbs. Model 303 can be shipped assembled. Let us know YOUR requirements.

CLAIR
MANUFACTURING CO., Inc., OLEAN, N.Y.

Offering the Most VERSATILE Line of Surface Finishing Machines

▲ For more details circle NED-380 J9 on enclosed inquiry slip ▲



How impact strength of laminates is measured. Why standards of measurement seldom tell the whole story. How heat and cold affect impact strength, and what other properties to look for in impact materials. All briefly described in Bulletin TP9-3. Write for it.

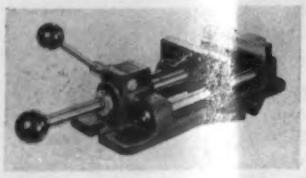
SYNTHANE

SYNTHANE CORPORATION
NE River Road, Oaks, Pa.
Please send me Bulletin TP9-3 on the impact strength aspects of Synthane laminated plastics.

Name_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle NED-381 J9 on enclosed inquiry slip ▲

DRILL PRESS VISE adjusts and locks quickly



Both rigid and non-rigid workpieces can be safely held in this drill press vise and fixture holder which is made in 4, 6, and 8 in. sizes with respective maximum openings of 5½, 6¼, and 8½ in. Front adjusting screw bushing varies jaw pressure from 1 to 1500 lb. Light hand pressure on bar locks and holds the work. Heavy, removable jaw inserts facilitate adaptation for low cost jigs and fixtures. Made by **L-W Chuck Co.**, 51 S. St. Clair St., Toledo 4, Ohio.

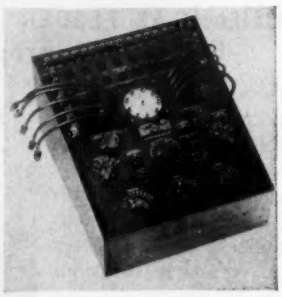
▲ For more details circle NED-382 J9 on enclosed inquiry slip ▲

ELECTRICAL HEAT CONTROL capacities up to 3000 w

Burnout protection and close regulation for all types of heating appliances are provided by the Hott-Watt electrical heat control. Unit shuts off power input at a fixed temperature level within ½° F. Units are available in ten capacities from 300 to 1500 w for 110-v circuits and in ten capacities from 600 to 3000 w for 220-v circuits. Mounted in cabinet, control is complete with receptacle, fuse protection, and pilot indicating light. Made by **Industrial Steam Equipment Co.**, 5 Gaston St., Roxbury 21, Mass.

▲ For more details circle NED-383 J9 on enclosed inquiry slip ▲

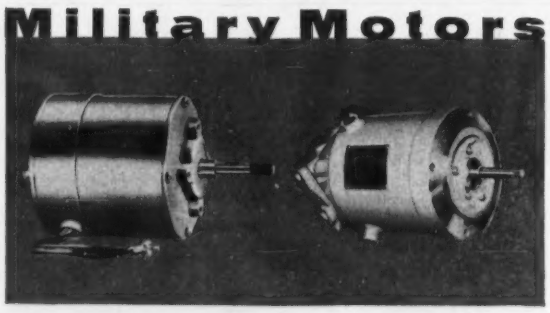
TUBE-TRANSISTOR BRIDGE has 270-400 or 1000 cps ranges



Low frequency dynamic coefficients of tubes and transistors can be measured over wide ranges of values under a variety of operating conditions by the Type 1661-A bridge. The direct-reading instrument has an amplification-factor range of 0.001 to 10,000. It operates in the 270-400 cps or 1000 cps frequency range. Thirteen adaptor plates accommodate tubes and transistors of varied types. A universal adaptor with nine soldering lugs is provided for unbased transistors, unmounted tubes, or tubes with nonstandard bases. Dynamic internal plate resistance range is 50 ohms to 20 megohms, maximum allowable plate current is 400 ma, and maximum plate voltage is 1500 v. Made by **General Radio Co.**, West Concord, Mass.

▲ For more details circle NED-384 J9 on enclosed inquiry slip ▲

Military Motors



Peerless military motors are available in drip-proof, splash-proof, totally enclosed, spray-tight and water-tight construction from ½ to 15 HP.

They meet specifications of ABS, U. S. Coast Guard, MIL-M-17413 (DC), MIL-M-17060A and 17059 (AC), AIEE 45 and radio interference. With standard or special mountings and features, they serve at land-based radar installations and aboard vessels throughout the world.

ELECTRIC MOTOR DIVISION
THE Peerless Electric® COMPANY
FANS · BLOWERS · ELECTRIC MOTORS
1527 W. MARKET ST. · WARREN, OHIO

▲ For more details circle NED-385 J9 on enclosed inquiry slip ▲

U.S. Flex *at WORK!* but Specifications Classified!

Photo of the Atomic Sub U.S.S. TRITON courtesy of United States Navy and General Dynamics Corp.

A tough Navy job! The assignment: meet the exacting and rigid requirements for auxiliary steam lines in an A-Sub! *U.S. Flexweld Hose did it!* This same U.S. Flexweld Hose serves you and other industries day-after-day in commercial use *at no premium for exceeding your specifications.*

Write us today about your tough problems. Give our engineers all the facts.

U. S. FLEXIBLE TUBING CO.
215 MAIN STREET, BARTLETT, ILLINOIS

▲ For more details circle NED-386 J9 on enclosed inquiry slip ▲

Portable mixer is big time-saver

mixes fluids quickly in can, drum, pail, or kettle

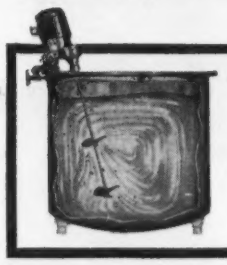
Why bother with special mixing tanks? You can power-mix fluids simply, rapidly in any open container—with a LIGHTNIN Portable Mixer.

Just clamp the LIGHTNIN to rim of vessel or to a separate support, as shown here. No baffles are needed in vessel.

Get just the mixing action you want by adjusting shaft angle. Rapid top-to-bottom turnover . . . slow roll . . . or vortex for quickly wetting fine powders. Your results are unconditionally guaranteed.

Mixer locks instantly at any position. True-running shaft is quickly removable, cannot loosen or jam. Widest choice of ball-bearing motors, shaft and propeller materials. Thirty portable models—⅛ to 3 HP—electric or air driven, direct or gear drive. Thousands in use.

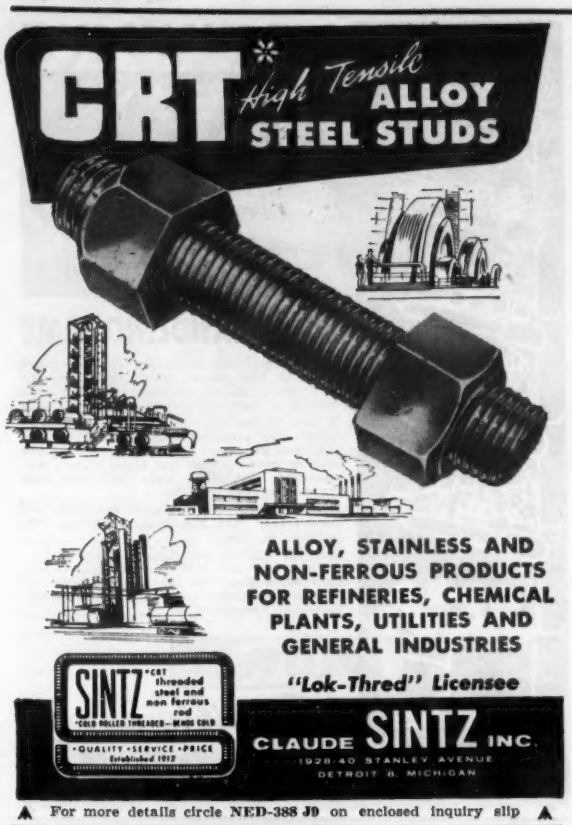
For details, plus helpful tips on industrial mixing, request 28-page illustrated Catalog B-108.



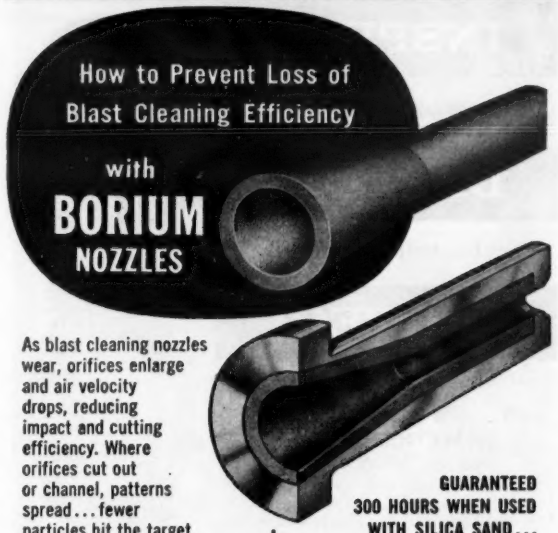
FAST, UNIFORM MIX. Powerful propeller stream tumbles and rotates the batch thoroughly. No swirl, no dead spots with LIGHTNIN double-action mixing.

"Lightnin® Mixers" MIXCO fluid mixing specialists
MIXING EQUIPMENT Co., Inc., 165-1 Mt. Read Blvd., Rochester 3, N.Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 19, Ont.

▲ For more details circle NED-387 J9 on enclosed inquiry slip ▲



▲ For more details circle NED-388 J9 on enclosed inquiry slip ▲



As blast cleaning nozzles wear, orifices enlarge and air velocity drops, reducing impact and cutting efficiency. Where orifices cut out or channel, patterns spread... fewer particles hit the target, again reducing cleaning speed.

BORIUM Nozzles are lined with pure tungsten carbide—hardest, most wear-resistant man-made metal. They hold original orifice size, resist cut-outs, stay on the job longer!

GUARANTEED 300 HOURS WHEN USED WITH SILICA SAND...

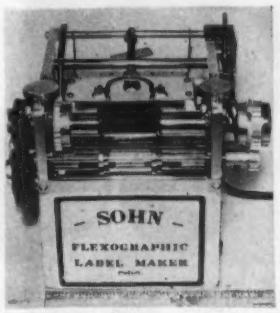
BORIUM Nozzles outlast hundreds of cast iron nozzles... eliminate frequent changes, save compressed air and power. Standard and special types for every requirement. Write for your free illustrated folder!

STOODY COMPANY
11992 East Slauson Avenue, Whittier, California

▲ For more details circle NED-389 J9 on enclosed inquiry slip ▲

▲ For more details circle NED-390 J9 on enclosed inquiry slip ▲

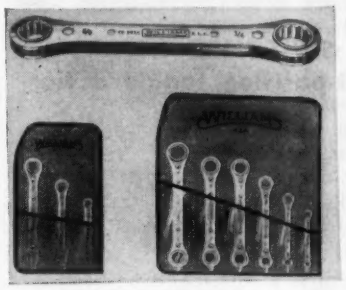
SMALL PRINTING PRESS prints and die cuts labels



Precision made, 9 x 9 x 9-in. 40-lb Flexographic printing press prints and die cuts pressure-sensitive label paper, or score cuts gum, heat seal, or plain paper. Easily operated press will print 6000 labels per hour in brilliant colors. Color and printing plates are quickly changed. Machine for 3 x 4-in. label sizes is priced at $395. A 4 x 5-in. press is available at extra cost. Made by **Sohn Mfg., Inc.**, Box 87, Plymouth, Wis.

▲ For more details circle NED-391 J9 on enclosed inquiry slip ▲

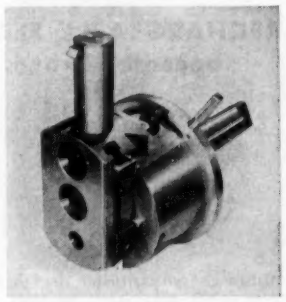
RATCHETING BOX WRENCHES in 1/4 to 7/8-in. sizes



Added to company's line of tools are six sizes of ratcheting box Superrenches with accurately broached 6 and 12-point openings. Sizes range from 1/4 to 7/8 in. All critical parts are made of alloy steel and heat treated. Wrenches are chrome-plated over nickel. They are sold individually, or in two sets in plastic rolls. Made by **J. H. Williams & Co.**, 400 Vulcan St., Buffalo 7, N. Y.

▲ For more details circle NED-392 J9 on enclosed inquiry slip ▲

FACING & BORING HEADS with continuous radial feed



Used with all types of rotating spindle machines, Davis 4, 6, and 10-in. diameter facing and boring heads have continuous radial feed. Cutting diameters from 7/16 to 25 in. are covered by the three sizes. Radial feed is adjustable to 0.0001 in. or finer. Feed rates are 0.0055, 0.005, and 0.0074 in. per revolution, respectively, with total slide travels of 1 1/4, 2, and 4 in. Tool bar diameters for the three sizes are 7/8, 1 1/2, and 2 1/4 in. Offered for use with the heads is a complete line of boring and facing bars, 90-degree holders, and pencil boring tools. Made by **Giddings & Lewis Machine Tool Co.**, Davis Div., Fond du Lac, Wis.

▲ For more details circle NED-393 J9 on enclosed inquiry slip ▲

Rapistan's new APC (Adjustable Pressure) Conveyor operates on less horsepower than any other form of power belt conveyor. Up to 200 ft. of conveyor powered by 1/3, 1/2 or 3/4 hp drives. Because power requirements are so exceptionally low, drive units are less costly, and belt tension (therefore belt stretch) is kept at absolute minimum. This means less maintenance for further savings.

Write for new Bulletin 1200 illustrating APC Conveyor.

Rapistan® new ideas in materials handling

The RAPIDS-STANDARD CO., Inc., 610 Rapistan Bldg., Grand Rapids 2, Mich.

▲ For more details circle NED-394 J9 on enclosed inquiry slip ▲

ON FILM SEALERS, CRIMPER JAWS, EMBOSSING ROLLS, PANS; STAMPING, FORMING DIES—MOLDS OF ALL KINDS

SIMPLY SPRAY ON THIS PURE SILICONE FLUID COATING

And your sticking problems are over!

The most economical way to apply costly Silicone Release Agents!

SAFE — NON-TOXIC
CLEAN — LONG LASTING

Handy Self Dispensing Can

Has No-Fumble, Speedy Spray Head

PRICES (Delivered)
Sample Can..... $2.00
Per Unbroken Dozen..... $18.00
Per Unbroken Gross..... $197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE RD. CLEVELAND 20, O.

▲ For more details circle NED-395 J9 on enclosed inquiry slip ▲

now available!

new pocket guide and catalog for better welding results

Nothing like it! Pocket size. Complete data on selection of rods and electrodes for welding stainless, low alloy, non-ferrous and light metals. Gives facts on applications, currents, preheating, annealing, AWS/ASTM classifications. Special sections on How to Get Better Stainless Welds, and Effect of Alloying Elements on Weld Metal. Comprehensive list of valuable technical data available. FOR FREE COPY write ARCOS CORPORATION, 1500 South 50th Street, Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

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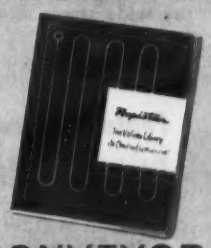
PROFITABLE READING



Free! THIS ONE-VOLUME LIBRARY ON OVERHEAD CONVEYOR

More than a dozen industrial applications of overhead trolley conveyors are illustrated in this One-Volume Library on Overhead Conveyor. Helpful facts are detailed on specifications, installation, and the care and use of this equipment in transportation, processing, assembly operations, storage. Bound to be profitable reading if you're interested in low-cost solutions to materials handling problems. Write for it now. Free on request. No obligation, of course.

SEND TODAY

Rapistan® OVERHEAD CONVEYOR

RAPISTAN-KEYSTONE, INC.
21752 W. 8 Mile Rd.
Detroit 41, Michigan

O K! Send me the library of overhead conveyor ideas

FIRM _____
ADDRESS _____ ZONE _____
CITY _____ STATE _____
ATTN. OF _____
KIND OF BUSINESS _____

▲ For more details circle NED-397 J9 on enclosed inquiry slip ▲

METZGAR NYLO-® BALL TRANSFER

LASTS 10 TIMES LONGER

• UNITS
• TABLES
• STANDS

RESISTS DETERGENTS MILD ACIDS ALKALIES SALT BRINE FOOD ACIDS SAND • OIL

METZGAR NYLO-BEARINGS, WHEELS and ROLLERS are available in all Metzgar Conveyors.

Ball units factory pressure-mounted in 3/16" steel base on 1/4" x 2" supporting frame on adjustable "H" stands. Height adjustable in 4 ranges from 10" to 50"

Write for prices and specifications.

METZGAR CONVEYOR CO.

416 Douglas St., N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES

GRAND RAPIDS 4, MICH.

▲ For more details circle NED-398 J9 on enclosed inquiry slip ▲

NEW! BAUSCH & LOMB STEREOMICROSCOPES

FEATURING

STEREO ZOOM

CONTINUOUSLY VARIABLE POWER

Here's a completely new optical concept to speed and simplify work requiring 3D views. Just turn the magnification knob and watch the crisp stereo image zoom to the *exact* size you need. Not just a few fixed powers, but *any* power within the wide stereo range. The newest step forward to faster, easier 3D work . . . exclusive with Bausch & Lomb.

Featuring Exclusive POWER POD Design Concept

- Sealed to prevent dust and foreign matter from entering optical system!
- No nosepiece!
- No individual objectives . . . no objectives to change!
- No image jump!
- No image blackout!

Featuring NEW LOW PRICE

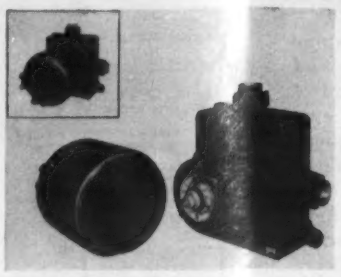
. . . about one-third lower than previous line!

BAUSCH & LOMB SINCE 1853

Bausch & Lomb Optical Co., Inc., 72745 St. Paul St., Rochester 2, N. Y.

▲ For more details circle NED-399 J9 on enclosed inquiry slip ▲

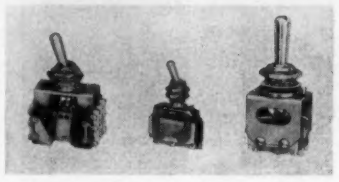
REPEAT CYCLE TIMER controls two load circuits



Designed for use in hazardous atmospheres, the Series 306A Duo-Set miniature repeat-cycle dial timer is equipped with an explosionproof case meeting certain NEMA specifications. It controls two independently adjustable load circuits, each rated 10 amp, 115 v ac; 5 amp, 230 v ac; or 1/4 amp, 115 v dc. Time intervals from 1/2 sec to 4 hr are knob-set, accurate within 1/3 per cent. Timing range is changed in 2 min by changing timer motor and dial. Motors for 115 or 230-v 50 or 60-cycle ac are offered. A built-in dwell protects reversing motors. Made by **Automatic Timing & Controls, Inc.**, King of Prussia, Pa.

▲ For more details circle NED-400 J9 on enclosed inquiry slip ▲

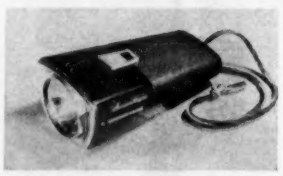
SUBMINIATURE SWITCHES have 2 or 3-position toggle action



Available with from one to eight - pole double - throw contact arrangements, Series 5300 subminiature toggle switches can have two or three-position actuation and various combinations of momentary and maintained positions. They are rated 5 amp resistive and 3 amp inductive at 30 v dc or 115 v ac. Solder hole, turret, or double turret terminals are optional, as are bushing or panel seal assemblies. Made by **Haydon Switch, Inc.**, 536 S. Leonard St., Waterbury 20, Conn.

▲ For more details circle NED-401 J9 on enclosed inquiry slip ▲

RECHARGEABLE FLASHLIGHT operates 2 hours continuously



To recharge this Life Lite Super 200 flashlight, it is pulled apart and battery portion is plugged into any 110-v ac outlet. The flashlight throws an intensive beam for up to 2 hours of continuous use and is recharged overnight at a cost of less than 1 cent. Two hermetically sealed rechargeable batteries have a charging circuit at the base of the case. It has a built-in magnet to hold it to metal surfaces, a luminescent switch for locating it in the dark, and a leather carrying strap. Leather grain carrying case and an auto recharging adapter kit are also available. Price is $9.95. Made by **Gulton Industries, Inc.**, 212 Durham Ave., Metuchen, N. J.

▲ For more details circle NED-402 J9 on enclosed inquiry slip ▲

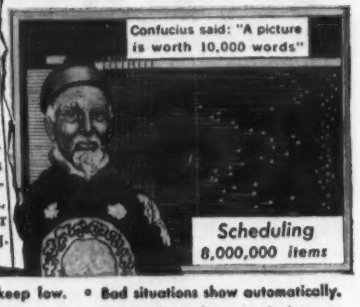
NAMES IN THE NEWS!

Jupiter! Redstone!

Missile Development Centers are among the largest Government Defense users of Produc-Trol for research, production, manpower and other types of scheduling.

PRODUC-TROL Visual Control

not only schedules, But automatically checks with TIME, LINE and COLOR control



- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Creator of Effective Tools for Effective Management

Phone Westport, Conn. CA 7-4111 or write

WASSELL ORGANIZATION, INC.
Westport, Conn.

Please send Free Booklet on Produc-Trol. NED
NAME ..... COMPANY .....
ADDRESS .....
CITY ..... STATE .....

▲ For more details circle NED-403 J9 on enclosed inquiry slip ▲

SAVE STORAGE SPACE

SAVE HANDLING TIME

Brown Sectional Stock Racks store more stock in less space. Handling is reduced to a short lateral movement instead of a long laborious end-haul.

Brown Racks are unique in both flexibility and economy. Spaced as required they can be easily relocated . . . they are neither cross-braced nor floor-bolted. Accessories, including base brackets and trays, increase usefulness.

Brown Racks are quickly installed, all components are slip-fitted together. No bolting, no tools.

WRITE TODAY for complete information on how low-cost Brown Stock Racks can help solve your storage problems. Brown Engineering Company, 129 No. 3rd Street, Reading, Pennsylvania.

BROWN *Flexible* STOCK RACKS

▲ For more details circle NED-404 J9 on enclosed inquiry slip ▲

INSPECT

Operating equipment

DETECT

trouble before it starts!

PROTECT

and hold output standards with WAGER INSPECTION LIGHT and/or VIEW PORT

You save dollars and downtime, with Wager equipment in Ovens, Dryers, Dust Collectors, Air Filters, Belt or Conveyor Housings, Storage Hoppers and prevent trouble *because you see it* before it happens!

A good idea for O.E.M! Specify Wager Inspection Light & View Port into your equipment. Make it more saleable.

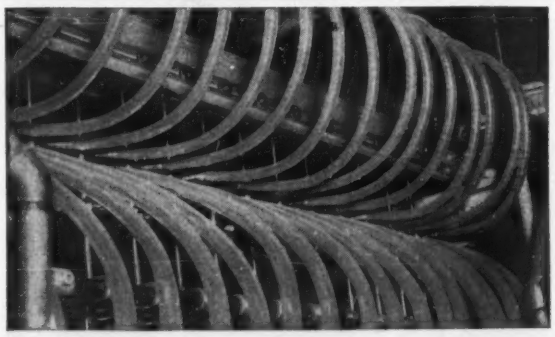
WAGER DESIGN FEATURES:

★ Globe of Explosion-Proof glass.
★ Heat-resistant glass View Port for up to 500° F. service.
★ Lamp and wiring installed from outside of installation. A 100 w. bulb mounted in vibration-proof holder.
★ 8¾" of dia. required for installing Inspection Light or View Port. Smaller sizes.
★ Units mounted in aluminum frames for lightness.

Complete information available. Send for Bulletin #1469.

ROBERT H. WAGER CO.
423 Valley Street, South Orange, N. J.

▲ For more details circle NED-405 J9 on enclosed inquiry slip ▲



TYGON® flexible plastic TUBING

- *Virtually Unlimited Applications*
- *Quick and Easy to Set-Up*

Tygon Tubing offers a unique combination of advantages. Its glass-like clarity permits visual inspection and control of flow. It resists oils, greases and chemicals. Because of its extreme flexibility, Tygon Tubing can be installed in minutes. Its hard, smooth bore is easily flushed clean. Physically tough and abrasion-resistant, Tygon Tubing provides long, trouble-free service life.

Tygon Tubings are available to handle full vacuums, or braid-reinforced to withstand pressures up to 300 psi. Over 65 sizes are available up to 4" I.D.

440-F

Write for free Bulletin T-97 . . . today!

OUR 100th YEAR

U. S. STONEWARE
AKRON 9, OHIO

▲ For more details circle NED-406 J9 on enclosed inquiry slip ▲

SLASH washing costs

with John BEAN

AQUABLAST

HIGH PRESSURE WASHERS

IS YOUR CLEANING PROBLEM ONE OF THESE...OR SIMILAR?

- Processing tanks
- Metal rust or scale
- Heat exchanger tubes
- Boxcar interiors
- Cement trucks
- Animal carcasses
- Food plant floors
- Chemical residues

One man with AQUABLAST equals a crew of men using ordinary water pressures. The important difference is that water, discharged at 600 lbs. pressure from an Aquablast gun, cuts through caked dirt, hardened deposits, gummy residues or accumulated grime like magic! John Bean Aquablast Washers are complete, motor driven pumping units for use with 1 to 3 guns.

Send information request form — today!

John BEAN Division of Food Machinery and Chemical Corporation

INDUSTRIAL SALES DEPT.

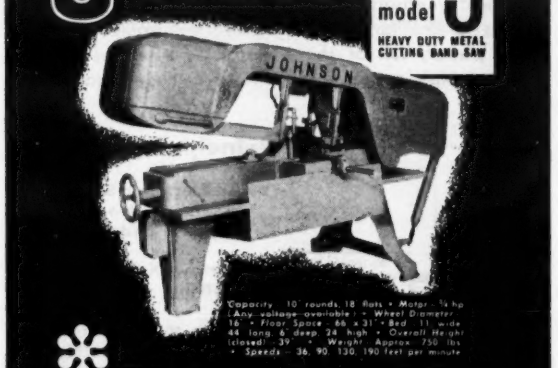
LANSING 4, MICHIGAN SAN JOSE 1, CALIFORNIA

▲ For more details circle NED-407 J9 on enclosed inquiry slip ▲

COMPARE

and you'll get a BIG NEW Johnson model J

HEAVY DUTY METAL CUTTING BAND SAW



Capacity - 10" rounds, 18" flats • Motor - ¾ hp (Any voltage available) • Wheel Diameter - 16" • Floor Space - 66" x 31" • Bed - 11" wide 44" long, 6" deep, 24" high • Overall Height (closed) - 39" • Weight - Approx. 750 lbs • Speeds - 36, 90, 130, 190 feet per minute

COMPARE the handsome, husky Johnson Model J with any metal cutting saw and here's what you'll find:

- Johnson leads the way in dependable, well-engineered, high performance band saws.
- A Johnson saw will cut anything in your stock pile, and do it faster.
- Johnson saws contain more exclusive construction and performance features that save time and money.
- Johnson saws are the finest metal cutting machines available anywhere—and, at the lowest price!

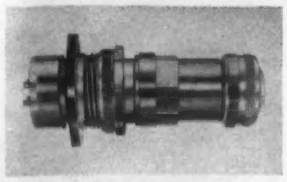
COMPARE . . . and see for yourself how easily you can save time, labor and production dollars with a Johnson saw. Complete information, prices — are yours for the asking.

Johnson MANUFACTURING CORPORATION

Barnes & Taylor Sts., Albion, Mich.

▲ For more details circle NED-408 J9 on enclosed inquiry slip ▲

ELECTRICAL CONNECTORS
environment resistant type



Type RPE Ark-trol electrical plugs and receptacles are resistant to alkalies, strong caustics, acids, and petroleum base and organic solvents. Of environment resistant construction, they are moistureproof, shock-insulated, dust-tight, and operate in a —80 to 225° F range. Connectors withstand an external pressure of 300 psi and internal pressure of 200 psi. Polarization of shell-to-shell and insert assembly-to-insert assembly is foolproof. Sealing is with O-ring type seals. Made by **Crouse-Hinds Co.**, Syracuse 1, N. Y.

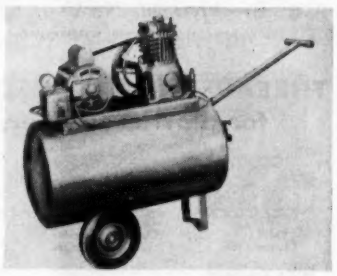
▲ For more details circle NED-410 J9 on enclosed inquiry slip ▲

WAY BEARINGS
for linear positioning

Precise movement of heavy machine elements is realized with Tychoway anti-friction way bearings for linear positioning. Flat compact design and the recirculating roller principle spread the heavy loads over a large surface to minimize wear. Made from Type 52100 bearing steel, the preassembled, modular units mount on V and flat ways, spindles, pull-out components, retractable runways, sliding doors, and various machine elements. Five standard sizes have static load capacities from 2000 to 32,000 lb. Made by **Scully-Jones & Co.**, 1901 S. Rockwell St., Chicago 8, Ill.

▲ For more details circle NED-411 J9 on enclosed inquiry slip ▲

AIR COMPRESSORS
1/2, 3/4, and 1 hp, develop 150 psi



Three tank-mounted air compressors added to company's line are offered in ½ and ¾-hp wheel mounted or stationary models, or 1 and ½-hp stationary models only. The ½ and ¾-hp units have 110/220-v ac, 1750-rpm Westinghouse motors, whereas standard make 220-v ac motors are provided on the 1 and ½-hp models. Applicable to all types of spraying, air tools, air cleaning equipment, and lubrication uses, compressors develop up to 150 psi. A ¾-hp portable model is shown. Made by **National Compressor Corp.**, 933 W. Lake St., Chicago 7, Ill.

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MAYLINE

Your Copy of Catalog 10 Ready Now!

May-O-Matic table fully described and illustrated. All 4-Post and pedestal style tables are portrayed and explained. Sizes and combinations of plan files are listed and shown.

Various styles and construction of straightedges clearly presented for your personal selection.

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MAYLINE COMPANY, INC.

617 No. Commerce St., Sheboygan, Wisconsin

MAYLINE

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High Efficiency

DUST COLLECTION

at Low Cost

- Greater gas flow per tube
- Fewer tubes per collector
- Flexible designs
- Many applications

Result: Lower total cost for a given capacity and efficiency

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RESEARCH-COTTRELL

Main Office and Plant: Bound Brook, N. J.

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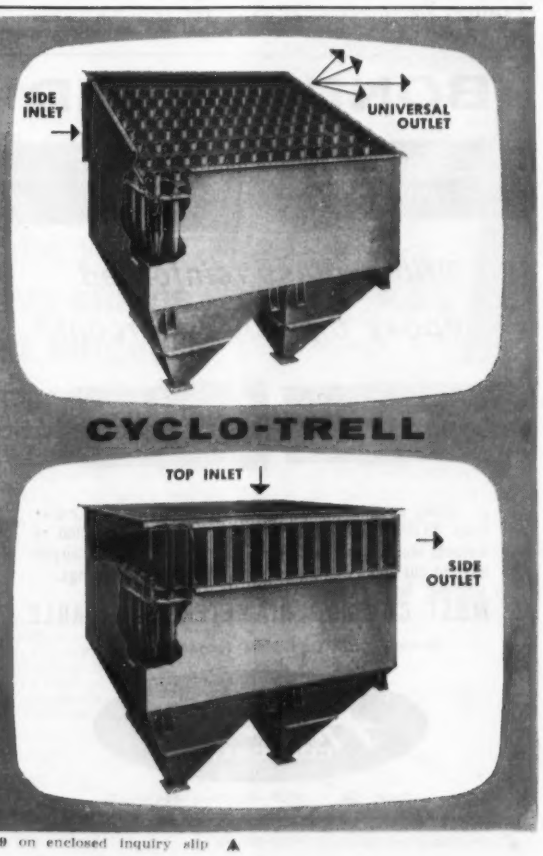

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SNAP-LOCK Limit Switches

Actuate Two Circuits Simultaneously... Without Special Linkage

The D-2400 series Snap-Lock Limit Switches with two normally open and two normally closed contacts permit making or breaking two individual circuits simultaneously. Mounting problems are simplified, special linkages eliminated and costs kept to a minimum.

Snap-Lock Limit Switches were originated by National Acme to meet the severe mechanical and electrical conditions imposed by all types of machine tools. The outstanding simplicity and ruggedness of these water and oil tight switches make them adaptable to the toughest heavy-duty assignments.

Four basic models with a wide variety of actuating levers will handle up to 5 amps, 600 volts, AC. For complete details, parts list, and scale drawings, write for Bulletin EM-5824.

National Acme

THE NATIONAL ACME COMPANY 182 E. 131st STREET CLEVELAND 8, OHIO

Sales Offices: Newark 2, N. J., Chicago 6, Ill., Detroit 27, Mich.

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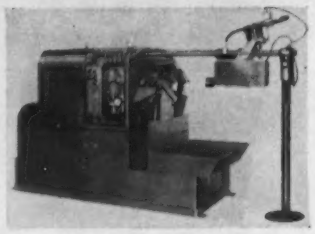
FASTER AUTOMATIC CUT-OFF Tubing, Pipe and Bar Stock

the Modern Way

Automatic operation—from loading to final cut-off. Handles solid bar stock up to 3" O.D.—tubing up to 8" O.D. Cuts any material that can be turned. 16 spindle speeds.



CATALOG

Has complete specifications of all models. Illustrates parts that are being formed, grooved, flanged or chamfered and cut off in a single operation at a high rate of speed. Also describes the automatic feeder, hot spinning machine for sealing ends of tubing, and the Modern Safety Drill Table.

168

WRITE

MODERN MACHINE TOOL CO.
2005 Losey, Jackson, Michigan

▲ For more details circle NED-415 J9 on enclosed inquiry slip ▲

Solve Parts Handling Problems with New "Idea File"

Here are dozens of practical solutions for simple automation!

If you're thinking of automating some of your parts handling, be sure you see Gear-O-Mation's new "Idea File". This graphic presentation contains dozens of simple, proven, time-and-money-saving ideas for every phase of automated parts handling – feeding, orienting, conveying, distributing, positioning, etc. And this line-up of parts handling techniques will suggest still further variations and adaptations to help you find the exact answer you need.

Your Gear-O-Mation field engineer carries the "Idea File" with him and he'll be happy to go through it with you. Call him or use the coupon below to arrange a showing. There is no obligation, of course.

GEAR-O-MATION

DIVISION OF MICHIGAN TOOL COMPANY
7171 E. McNichols Rd.
Detroit 12, Mich.

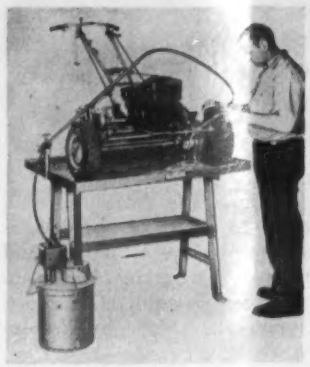
Yes! I want to see your new "Idea File" as soon as possible.

Please have your field engineer call for an appointment.

Name_____
Company_____
Street_____
City_____

▲ For more details circle NED-416 J9 on enclosed inquiry slip ▲

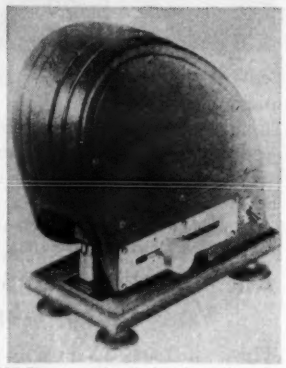
EQUIPMENT CLEANING STAND includes sink and solvent motor-pump



Saws, engines, mowers, machines, subassemblies, and parts are readily cleaned with standard solvents using this Model 80 Ideal cleaning stand. Basic components are a 12-gage metal sink which slopes to a drain in one corner and a separate motor-pump unit which clamps on a 5-gal solvent drum. This recirculates up to 2 gpm of solvent, and baffling causes dirt and grease to settle to bottom of container. A 6-in. strainer holds larger dirt particles. Solvent can be re-used indefinitely. An aerating nozzle on a flexible, adjustable hose delivers splashless, steady stream wherever needed. Stand supports up to 500-lb loads. Made by **Fate-Root-Heath Co.**, Plymouth, Ohio.

▲ For more details circle NED-417 J9 on enclosed inquiry slip ▲

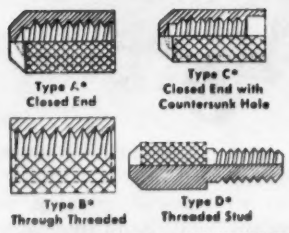
ELECTRIC STAPLER tripped by inserting material



Stapling of booklets, bags, correspondence, and other material is performed automatically by the Staplex S-54 electric stapler. The material to be joined is merely inserted. A standard preformed staple is driven by a solenoid which trips as work is fed to it. Reloading is from the front. Made by **Staplex Co.**, 777 Fifth Ave., Brooklyn 32, N. Y.

▲ For more details circle NED-418 J9 on enclosed inquiry slip ▲

THREADED BRASS INSERTS for plastics, rubber, and ceramics

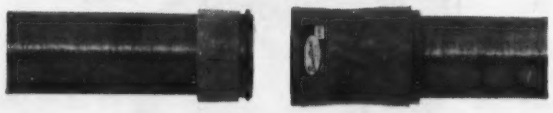


YARDLEY BRASS and ALUMINUM INSERTS

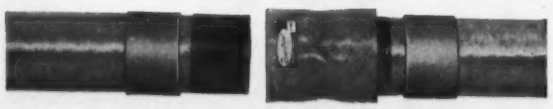
Closed end, closed end countersunk, through threaded, and threaded stud type brass inserts are tapped or threaded to ASME Class II specifications in sizes from 4-40 to 1/4-28. Coarse knurling provides holding power when molded in plastic, rubber, or ceramic products. Inserts are easily placed on locating pins and in assemblies. Made by **Yardley Precision Products Co.**, 43 Afton Ave., Yardley, Pa.

▲ For more details circle NED-419 J9 on enclosed inquiry slip ▲

BONDSTRAND®



fiber-glass reinforced epoxy pipe by Amercoat®



... strong as steel pipe, only one-eighth the weight. Tensile: hoop 80,000 psi, longitudinal 40,000. Highly corrosion resistant. Won't scale, cold flow or deform. 20-foot lengths easy to cut and join; threaded or locking wedge fittings.

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Amercoat CORPORATION

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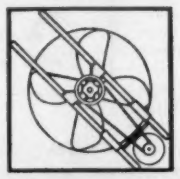
low initial cost
low operating cost

You save money when you install quiet, efficient fans — oscillators, air circulators and both belt-drive and direct-drive exhaust fans—backed by the Emerson-Electric famous factory-to-user guarantee.



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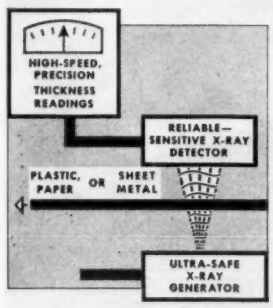
Control Thickness and Profile of Foils and Films with *NEW* Pulsing Type SHEFFIELD MEASURAY GAGE

Sheffield Measuray Gage Model 25 PT continuously checks to "millionths" the thickness or profile of plastic films, paper, foil or sheet metal as it leaves the mill rolls at high speed. No contact between gage and material.



Principal Features

- All-Electronic System assures high-speed response and accuracy
- Narrow X-ray beam for profiling
- Short pulsing of X-ray assures extra safety
- Modular construction facilitates quick, easy maintenance

For Engineering Data Sheet No. 113-57, write to the *Sheffield Corporation, Dayton 1, Ohio, U.S.A., Dept. 13.*

8273

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of Bendix Aviation
manufacture and measurement for mankind

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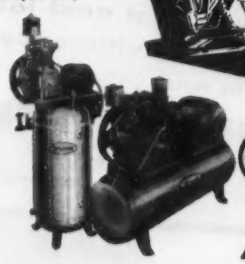
Check EXTRA VALUE

Check the extra value in Wayne Air Compressors. Write for catalog to: THE WAYNE PUMP COMPANY, Industrial Div.—Fort Wayne 4, Indiana, Div. of Symington Wayne Corp.



Wayne COMPRESSORS

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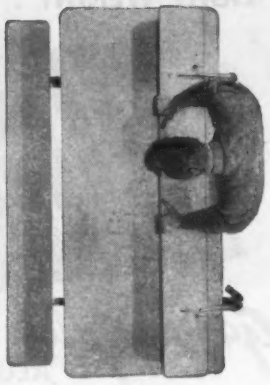
free booklet

shows how your seating dollar buys more with the SICO system!



The Model 1900 (illustrated) is another member of the famous Sico line. Designed for the utmost in efficient seating, minimum maintenance requirements, the Model 1900 features:

- "Unitized" structural steel frame
- Long-wearing melamine plastic top
- Fold-up benches for easy cleaning and floor maintenance.

If your seating problem demands fixed seating, these rugged, attractive Sico tables offer the most economical solution.

The complete Sico line includes folding table-bench units, folding tables, and fixed tables with folding benches.

free booklet

shows how the Sico System saves you money, gives you *extra* floor space in your plant! Write today to:

SICO manufacturing company, inc.
Dept. 2012, 5215 Eden Avenue South
Minneapolis 24, Minnesota

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Snap-on®

Famous Blue-Point Brand

OPEN-END WRENCHES

mechanics rate 'em

BEST

- **Rugged Strength**
- **Lightweight**
- **Slim Heads**
- **Tapered Jaws**
- **Balanced Design**
- **Easy-Grip Handle**
- **Fine Alloy Steel**
- **¼" to 1⅝" Sizes**

Write for 112-page Catalog W.

SNAP-ON TOOLS CORPORATION
8110-I 28th Avenue • Kenosha, Wisconsin

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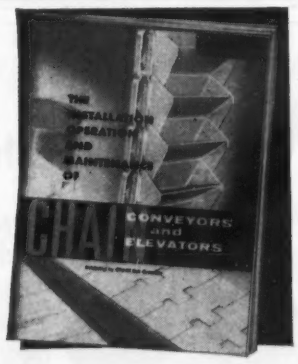
FREE MANUAL

How to extend conveyor life



Here are the facts on how to install, operate, maintain and extend the life of your conveyor chain.

These are the do's and don'ts the experts follow—the procedures that insure against costly down time and premature replacement. Send for FREE MANUAL today.

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CHAIN Belt Company 59-118
4686 W. Greenfield Ave., Milwaukee 1, Wis.
(In Canada: CHAIN Belt (Canada) Ltd., 1181 Sheppard Ave. East, Toronto)
☐ Please send free manual on care and maintenance of conveyor chains.
☐ Have a Rex Man call.
Name _____
Address _____
City _____ Zone ____ State ____

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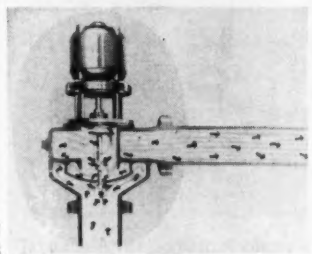
SAFETY FOOT SPRAYER
dispenses athelete's foot preventive

Four fine jets spray the feet and toes with Onox athlete's foot preventive when a user steps on the treadles of this Footsprayer. Especially suited for use in industrial plant wash and shower rooms, this sprayer uses only half as much solution as the Onox sponge rubber foot mat, reducing the cost to only 1/10 cent per treatment. Made of sanitary Fiberglas and polyethylene on a rubber base, it is easy to clean and holds sufficient Onox for 3000 treatments. Fungistatic Onox provides a drying action and is reported to keep feet tough and healthy. Sprayer is offered on a 60-day money-back trial. Write on company letterhead to **Onox, Inc.**, Dept. B-2, 121 Second St., San Francisco 5, Calif.

▲ For more details circle **NED-427 J9** on enclosed inquiry slip ▲

CONTINUOUS MIXER
mounts directly in pipeline



Suited for pilot plant or small production operations, this Flomix continuous in-line mixer is offered in ½ and 1-in. sizes. Variable speed drive can be used where processing changes are anticipated. Mounted directly in the pipeline, it will combine liquids, solids and liquids, or gases and liquids which will readily flow. Typical uses include mixing, blending, reacting, washing, absorbing, and clarifying. Made by **Nettco Corp.**, 81 Tileston St., Everett 49, Mass.

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DUAL MOTOR VIBRATOR
produces straight line vibration

Operating on a rotating eccentric weight principle and featuring adjustable eccentrics, the Model RC2-50 dual motor vibrator is geared for synchronous action. Force straight line vibration produced in any direction can be varied by adjusting throw of weights. There are four weights, two contrarotating on each motor. Variable impact range is from 640 to 2200 lb. Operation is practically noiseless. Unit weighs 100 lb and measures 12 5/16 x 12⅝ x 7⅛ in. Input is 1000 w. Made by **Cleveland Vibrator Co.**, 2828 Clinton Ave., Cleveland 13, Ohio.

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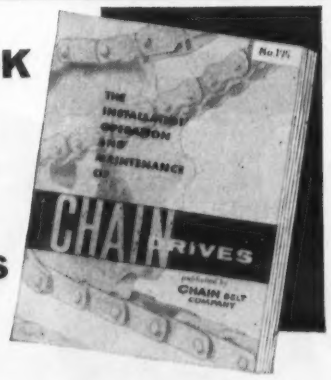
FREE BOOK

tells you how to make your drive chains last longer



Thousands of chain drive dollars have been saved—countless down-time hours have been eliminated—by following the suggestions given in the new booklet, "Care and Maintenance of Chain Drives." Send for your free copy today.

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☐ Please send new booklet, "Care and Maintenance of Chain Drives."
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How long since you checked your wire cloth filtering or screening? Perhaps new alloys, mesh sizes and weaves can show you new efficiencies and economies. Check your specifications and requirements with Cleveland today. They have available hundreds of the finest quality wire cloth samples from which to select a wire cloth for your needs. You can rely on Cleveland's recommendations — supported by 40 years of manufacturing experience in the weaving of wire cloth and fabrication into products. Send specifications today. Ask for Bulletin No. 7.

See our ad in MacRae's Blue Book and The Purchasing Directory

THE CLEVELAND WIRE CLOTH & MFG. CO.
3573 EAST 78th STREET, CLEVELAND 5, OHIO • DI 1-1832

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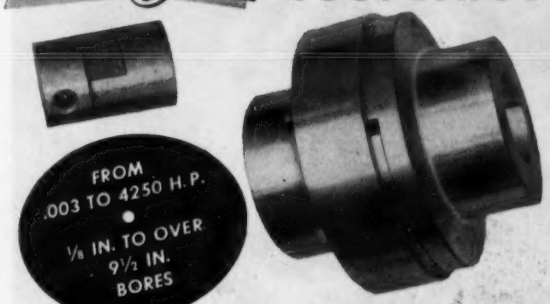
Lovejoy FLEXIBLE COUPLINGS



★ ***Can be installed in minutes***
★ ***Align with a straight edge—no gauges required***

The most trouble-free couplings you can install on your equipment . . . no complicated mechanisms, all parts open for inspection, reversible cushions, no lubrication required. Immediate delivery from stock in any quantity.

Send us your requirements for quick recommendations and prices. Ask about our helpful Flexible Coupling Guide Sheet and request Catalog C-56.

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FREE BOOK ON BEARINGS.

Gives you complete data on the industry's most complete line of mounted roller bearings—Shafer.

This new Shafer catalog is compiled specifically to help you meet the increased responsibilities of building greater speed, higher load capacities and longer life into your equipment.

It is packed with factual information on roller bearing design—specifications, lubrication, seals and installation features that protect your equipment. Send for your free copy. CHAIN Belt Company, 4686 W. Greenfield Avenue, Milwaukee 1, Wis. In Canada: CHAIN Belt (Canada) Ltd., 1181 Sheppard Ave., East, Toronto.

SHAFER® BEARINGS
CHAIN BELT

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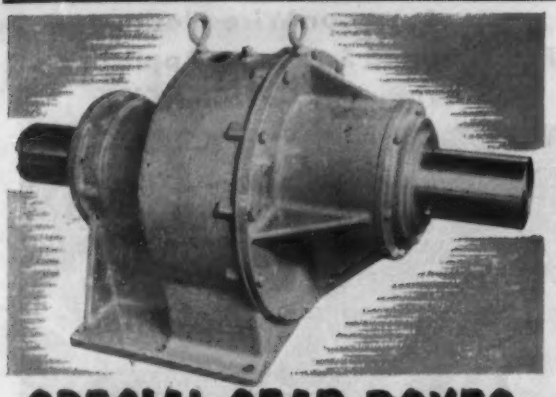

SPECIAL GEAR BOXES

Announcing a new Sewall Service

Designing . . . Development . . . Manufacturing . . . to help solve your special gear box problems. We're ready to work with you at any stage of your project's development. From scratch . . . we'll design your gear boxes . . . just give us your basic idea. From your prints . . . let us submit our quotation on your requirements. We invite your inquiry . . . Check Sewall Service today.

Complete gear service . . . custom made gears . . . made-to-order sprockets . . . special gear racks —to order . . . standard gear racks in stock

SEWALL GEARS

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Dept. D 705 Raymond Ave.
St. Paul 14, Minn. MIdway 5-7721

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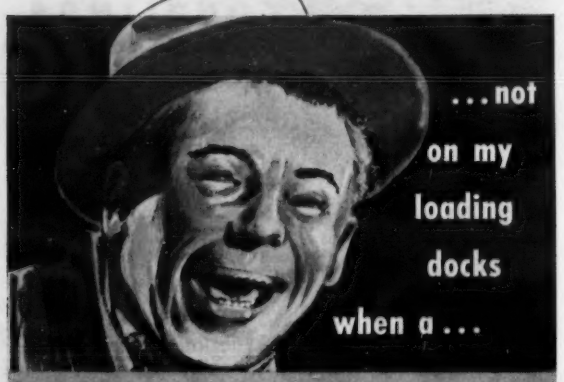
CAR LOAD BAGS BY HAND?



POWER-CURVE automatic installation will show me a healthy saving in just one season!

POWER-CURVE makes a quick payout with any bagged product, loading without physical lifting, without interruption and *with just one man* . . . replaces a steady parade of hand trucks and labor. POWER-CURVE will flatten filled bags, route them to storage or to the dock, fill box cars or trucks from end-to-end and to full height neatly stacked against transit damage. POWER-CURVE can transfer, elevate, sort and select. It can unload, convey mixed loads, palletize and economize! Suitable also for cartons and miscellaneous items. It is self-powered, mobile, fully flexible and variable in height . . . now used in over 300 different plants in a dozen major industries. Write for information tailored to your requirements, no obligation.

TEN TYPICAL POWER-CURVE USERS

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Pillsbury Mills, Incorporated	U. S. Gypsum Company
International Minerals and Chemical Corp.	American Potash and Chemical Corp.
General Mills, Incorporated	Lone Star Cement Corp.
National Gypsum Company	Penn-Dixie Cement Corp.

POWER-CURVE
CONVEYOR COMPANY
2185 SOUTH JASON ST., DENVER 23, COLORADO

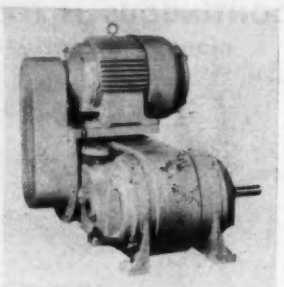
▲ For more details circle NED-435 J9 on enclosed inquiry slip ▲

CROSS-SLIDE TABLE fits 12-in. rotary tables

Only 15 in. long and 4 in. high, this Meehanite cross-slide table easily fits all 12-in. or larger rotary tables for radii and angle milling on vertical milling machines. It is especially adaptable for work on mold cavities, plungers, dies, and templates. Table top measures 8 x 12 in. and has four T-slots with 6-in. scales on each slide. Dials are graduated from 0.001 to 0.050 in. per revolution. Top and bottom are precision ground, whereas ways and gibs are hand scraped. Made by **Lawrence H. Cook, Inc.**, 65 Massasoit Ave., East Providence, R. I.

▲ For more details circle NED-436 J9 on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE has 1.2 to 4660 rpm output range



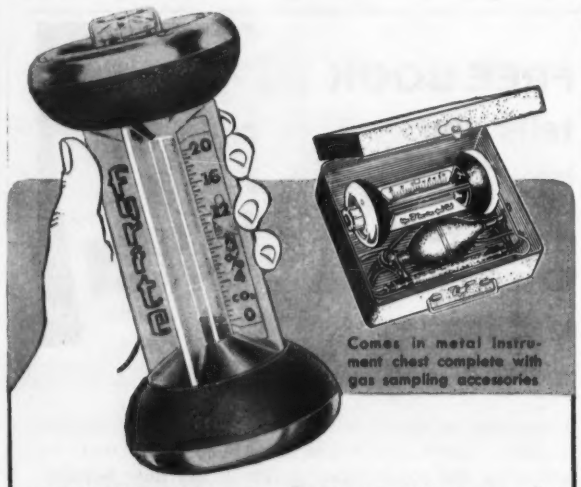
Separate, "piggy-back" motor construction of this mechanical variable speed drive affords compactness. Through proper selection of V-belt and timing belt, output speeds from 1.2 to 4660 rpm are possible, with speed variations from 2:1 to 10:1. Offered in ½ through 30-hp ratings, drives are available with dripproof, totally-enclosed, explosionproof, and special motors. Made by **Sterling Electric Motors, Inc.**, 5401 Telegraph Rd., Los Angeles 22, Calif.

▲ For more details circle NED-437 J9 on enclosed inquiry slip ▲

RUBBER CHUTE LINING resists wear for long periods

Steel and wooden chutes can be protected from the ravages of highly abrasive materials by Rifflestrip, a rubber chute lining. A Rifflestrip bed is made up of any number of individual L-shaped 2-in. strips of pure gum rubber, placed together tightly with the riser of each strip forming a series of parallel ridges across the chute. The ¾-in. strip base forms a continuous protective chute liner. Strips are nailed or bolted to the chutes. Once in use, abrasive material fills in the grooves between the ridges, causing the material to run over itself, and abrading only itself. Strip is offered in easily-cut 6-ft lengths. Made by **B. F. Goodrich Industrial Products Co.**, 500 S. Main St., Akron 18, Ohio.

▲ For more details circle NED-438 J9 on enclosed inquiry slip ▲



ACCURATE CO_2 Analysis in 40 Seconds!

Other outstanding features of the FYRITE CO_2 Indicator are its durable, fool-proof construction and unmatched convenience of operation. It requires no setting-up, has no valves or leveling bottle to manipulate.

The FYRITE measures CO_2 directly by the fundamental method of chemical absorption. Consequently, the reading is independent of voltage, humidity, temperature, or atmospheric pressure conditions.

Comes complete with chemical charge good for at least 300 readings. Replacing chemical merely requires removing four screws that hold top assembly in place.

Write for Bulletin 805

BACHARACH Industrial Instrument Company
200 N. Braddock Ave. • Pittsburgh 8, Pa.

▲ For more details circle NED-439 J9 on enclosed inquiry slip ▲

Gary Galok* SUPER SERRATED ALUMINUM GRATING

Serrations scientifically designed to provide maximum positive footing. High strength to weight ratio, minimum deflection, maximum safety, corrosion resistant. Bars cannot turn, twist, loosen or fall out. Write for detailed specifications.

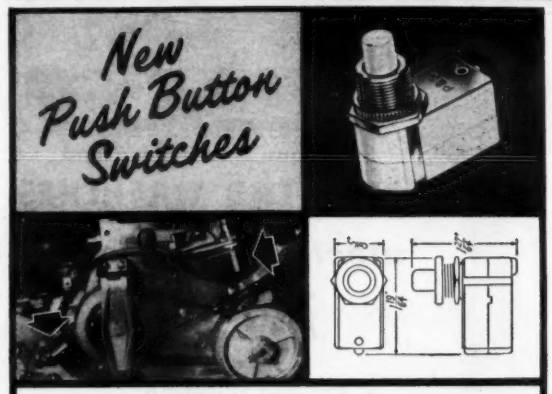
Gary SUPER Galok also available with plain bars.
Sizes for every need.

*Patents Pending

Catalog N-99

ROCKWELL-STANDARD CORPORATION
GRATING DIVISION
4017 E. Seventh Ave., Gary, Indiana

▲ For more details circle NED-440 J9 on enclosed inquiry slip ▲



- SINGLE POLE
- THREE WAY
- TWO CIRCUIT
- MOMENTARY CONTACT Normally Open or Normally Closed

6A 125V 3A 250V 1/6 HP 125V For AC-DC Operation

Available with Wire Leads, Solder Lugs, Binding Screws or Plug-In Terminals — on special order.

Electrical products are only as efficient as their controls. That's why so many manufacturers specify P&S 1205. This switch is highly sensitive, compact yet rugged. New over-center snap action gives positive make and break. Features silver alloy contacts and dust-tight plastic housing. Shown above, P&S 1205's installed in a Smith-Corona electric office typewriter. Smith-Corona found the 1205 ideal for this application.

If you have a problem involving wiring devices, write us.
Write Dept. NED 959 for complete information.

PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK

60 E. 42nd St., New York 17, N.Y. 1440 N. Pulaski Rd., Chicago 51, Ill. In Canada, Renfrew Electric Limited, Renfrew, Ontario

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Specify **the Best in Engraved Tools**

The quality of your product deserves equal quality in your marking.
Our complete inventory of alloy steels permits instant selection to meet your requirements.
Style of lettering is tailored to your job.
Quotations furnished promptly upon request.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

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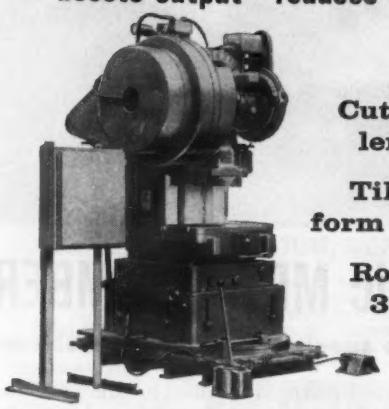
New FEDERAL

"FLYING CUTOFF"

boosts output—reduces costs!



Cuts any length

Tilts to form shapes

Rotates 360°

Federal's new "Flying Cutoff" is adaptable to a variety of metalworking operations where rolling mills are used. It can double production ... cut costs ... help you beat competition. Air-clutch control panel synchronizes press with speed of mill—permits cutting bars, channels, angles, other shapes to *any length*—continuously. Custom fabricated base provides for 360° rotation of the press. Hydraulic power permits tilting at any angle to form shapes. One-piece, machine tool grade cast iron frame, finest workmanship, and many other quality features. Up to 100-ton capacity. Write for catalog!

FEDERAL PRESS COMPANY, 906 Division Street, Elkhart, Indiana

FEDERAL Openback Inclinable **PRESSES**

34 Years of Quality Construction

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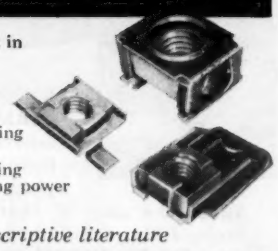
Nut-in-a-cage eliminates welding or staking...

Tinnerman SPEED GRIPS®

hold themselves on panels!

- Spring steel cage retains nut in blind locations
- Snap in place anywhere along assembly line
- Apply after painting, eliminate masking or retapping of paint-clogged threads
- Ideal for applications requiring extra-high torque and holding power
- Wide range of screw sizes



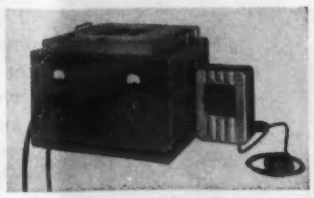
Write for free descriptive literature

TINNERMAN PRODUCTS, INC.

BOX 6688 • DEPARTMENT 12 • CLEVELAND 1, OHIO

▲ For more details circle NED-444 J9 on enclosed inquiry slip ▲

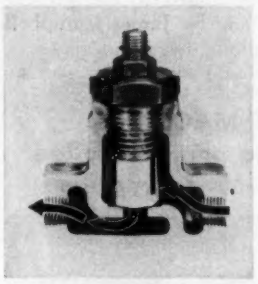
INDUCTION HEATERS
handle metals and nonmetals



Small vacuum type high frequency induction generators are adaptable for laboratory and light production heating. Model L4C, rated ½ kw, heats metals, and Model C-63 has a similar output for the heating of such nonconductors as plastics and resins. Both bench mounted units have full control over power output and time cycles. They weigh less than 80 lb and operate on 110-v ac. Special work coils for the generator and dies for the dielectric unit are available. Made by **Reeve Electronics, Inc.**, 609 W. Lake St., Chicago 6, Ill.

▲ For more details circle NED-446 J9 on enclosed inquiry slip ▲

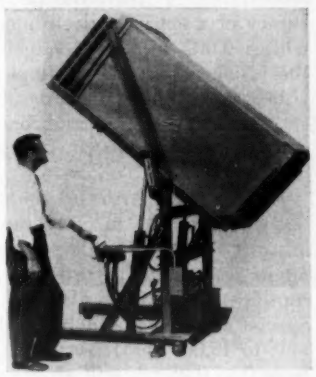
SPEED CONTROL VALVES
of self-cleaning construction



Varied lengths of the four orifices in the poppet of these speed control valves permit micrometer adjustment of exhaust air flow from zero to full pipe capacity. Positioning the stem increases or decreases the total orifice area. A lock nut holds the adjusting stem setting. The Buna-N seat on the poppet provides a positive seal and eliminates wear. Valves are self-cleaning, precluding clogging by dirt which would change the setting. Made by **Automatic Valve Co.**, 37415 Grand River Ave., Farmington, Mich.

▲ For more details circle NED-447 J9 on enclosed inquiry slip ▲

HYDRAULIC DUMPER
handles bulk containers up to 3 tons



Latest type bulk material containers, such as the Pillar-Pac shown in photo, are handled by the Hydro-Dumper at dumping heights up to 4 ft. Load capacity is up to 3 tons. Mobile units are mounted on four heavy duty ball bearing casters and have floor locks to hold dumper in position while loading or dumping. Grooved casters are available for floor track operations. Loaded by hand or fork truck, units are hydraulically operated by lever or pushbuttons. Made by **Essex Conveyors, Inc.**, 165 Franklin Ave., Nutley 10, N. J.

▲ For more details circle NED-448 J9 on enclosed inquiry slip ▲

- INCREASE ACCURACY
- REDUCE REJECTS
- SPEED SETUPS
- CUT COSTS WITH...

MACHINE PRODUCTS PRECISION EQUIPMENT

You'll hold closer tolerances and increase efficiency, too, when you use Machine Products precision surfaces. Because the combination of superior materials, skilled craftsmanship and rigid quality controls in the manufacture of Machine Products equipment assures you of the precise dimensional accuracies you require. A complete line of plates and accessories is available, so send for your free catalog today.

MACHINE PRODUCTS CORPORATION

6771 E. McNichols Rd. • Detroit 12, Michigan

▲ For more details circle NED-449 J9 on enclosed inquiry slip ▲

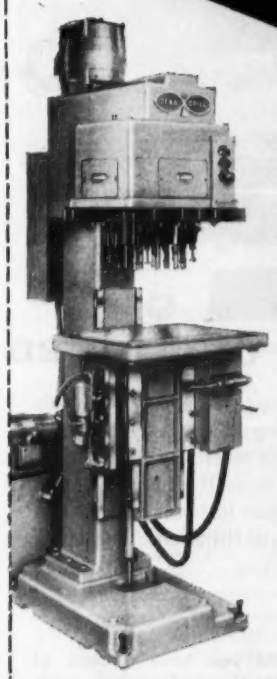
the NEW sensation of the machine tool industry!

PRECISION'S

DEKA® DRILL

MULTIPLE SPINDLE DRILLING AND TAPPING MACHINE

...save 50% on capital outlay costs!



Top Performance

- Fully automatic drilling or tapping cycle with push button controls! Up to 14 spindles available!
- Eliminates costly set-ups — makes production runs of 250 pieces profitable!
- Drills or taps 40,000 holes per hour — floor to floor time!

Outstanding Features

RUGGED CONSTRUCTION of Deka-Drill features heavily ribbed castings — will give years of trouble-free service.

HEAVY-DUTY HYDRAULIC MECHANISM is capable of delivering over two tons pressure to the ram-type table!

HYDRAULIC LIFT — a Deka-Drill exclusive—easily positions the knee and table over a full 14 inches!

HYDRAULIC MODEL H712

$3545.75

with motor and controls F.O.B. Factory

DEALERS: A FEW TERRITORIES STILL OPEN. WRITE FOR DETAILS.

MANUAL MODEL M712 $1998.50 with motor and controls F.O.B. Factory

PRECISION TOOL & MFG. CO. of ILLINOIS
Dept. NED-99
1305 S. Laramie Avenue
Cicero 50, Illinois

Please send me full information on Deka-Drill.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

▲ For more details circle NED-450 J9 on enclosed inquiry slip ▲

Simplatrol ELECTRIC CLUTCHES & BRAKES

...In New

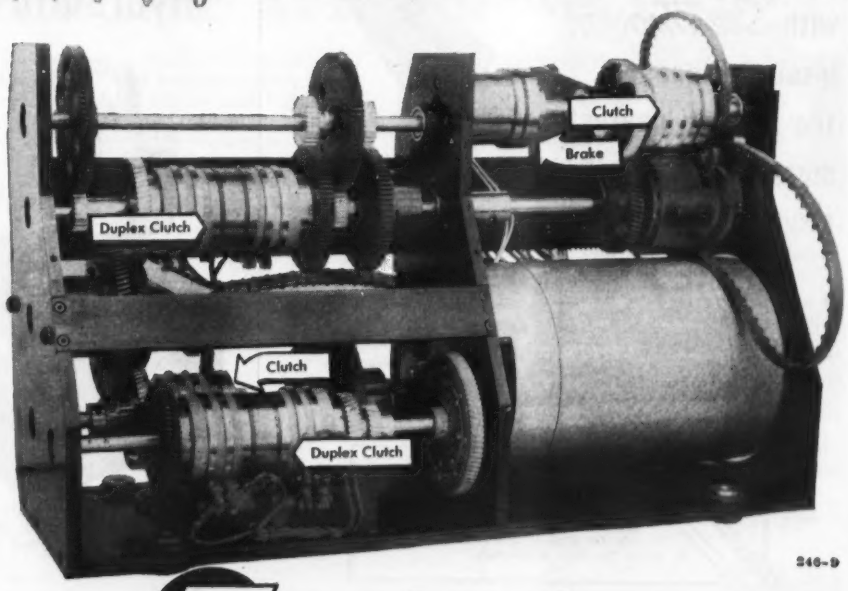
HONEYWELL VISICORDER® OSCILLOGRAPH

Here you see a classic illustration of the adaptability and versatility of Simplatrol Electric Clutches and Brakes. In this new Honeywell Model 1012 Visicorder Recording Oscillograph two sets of Simplatrol Duplex clutches, two Simplatrol clutches and one Simplatrol brake form a compact, swift, silent and sure "team".

The Heiland Division of Minneapolis Honeywell has set an extremely high standard of speed and accuracy for this clutch and brake installation. Simplatrol has met the challenge.

In Simplatrol electric clutches the patented diaphragm makes the difference ... it's the only moving part in the Simplatrol clutch and brake.

Ask for special Simplatrol literature on large, miniature and small and fixed field clutches and brakes.



246-9

Simplatrol products corp.

24-6 SALISBURY ST., WORCESTER, MASS.

Representation in Key Industrial Areas

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The Louis Allis IMMERSIBLE MOTOR

Here's an electric motor that's designed for continuous operation immersed in a liquid! Works in vat or sump — or at the bottom of a pool, lake, or ocean. You save the cost of shafting and bearings required by conventional surface-mounted motors.

The new Louis Allis immersible motor is completely leak-tight . . . can operate in fresh or salt water, sewage, chemicals, abrasive cutting oils, etc. It's ideal for vertical or horizontal mounting on pumps, agitators, mixers, and special equipment. ¾ to 40 hp. Send for Bulletin No. 2300. The Louis Allis Co., 436 E. Stewart St., Milwaukee 1, Wis.

SM-110

LOUIS ALLIS

▲ For more details circle NED-451 J9 on enclosed inquiry slip ▲

PRECISION BALLS

MATERIALS UNLIMITED

Hartford's leadership in research for better ball materials and higher precision is paying off every day for design engineers. It is paying off in a wider scope of materials, finer finishes and closer tolerances. It can pay off for you. Next time you have a problem that requires precision balls, regardless of the material characteristics required, let Hartford engineers assist you.

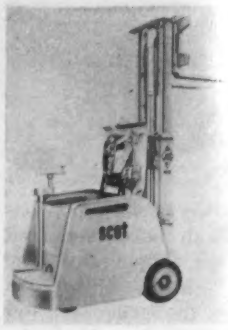
Do you have a copy of Hartford's Technical Guide to quick selection of precision balls for practically any requirement? Your copy will be sent promptly on request.

Specify Hartford PRECISION BALLS • BEARINGS

Hartford Steel Ball Co., Inc., 81 Jefferson Ave., West Hartford, Conn.

▲ For more details circle NED-452 J9 on enclosed inquiry slip ▲

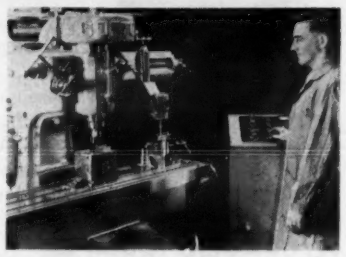
ELECTRIC LIFT TRUCKS in 3000 and 4000-lb capacities



All hydraulic and electric control mechanisms of this Scot electric lift truck are conveniently mounted in swing-up cover for immediate access. Short length combined with turning radius of 52 in. permits right angle stacking in 72 in. plus the load length and maneuvering in 60-in. intersecting aisles. Steering is full 360 degrees, or 170 degrees with removable stops. Speeds range to 6 mph, loaded. Telescopic masts provide lifts up to 130 in., and multilift, triple stage, and tri-free-lift masts are optional. Other features are deadman pedal, programming speed control, restricted load lowering, low center of gravity, and choice of 32 or 36-v batteries. A 2000-lb capacity model will soon be added to the present 3000 and 4000-lb models. Made by James Campbell Smith, Inc., 4057 Erie St., Willoughby, Ohio.

▲ For more details circle NED-453 J9 on enclosed inquiry slip ▲

AUTOMATIC MILLING MACHINE tracing and cutting are controlled laterally through 360 degrees



This Model 9-J Auto-Trace electro-hydraulic automatic milling machine uses a 360-degree tracer for controlled cutting in all lateral directions. It will also perform three-dimensional work which can be profiled with a special increment feed. Smoothness of hydraulic power is combined with accuracy of a sensitive electronic tracer to meet tolerances within 0.001 in. It is suited for production profiling the inside or outside of simple or complex shapes, machining extruding dies, cutting impeller blades, and similar work. With multiple cutters, more than one piece can be produced simultaneously from a single master.

Longitudinal hydraulic table feed is 23⅞ in. plus screw feed of 6¼ in. Hydraulic cross table feed is 10 in., and vertical knee screw feed is 14 in. All movements and auxiliary functions are controlled from the console panel which also contains a deflection meter. Special attachments include a high speed spindle (variable to 45,000 rpm), vertical increment feed with range from 0 to 0.25 in., and an in-cycle feed regulator which adjusts feed rate automatically during the cycle for best cutting efficiency. Made by George Gorton Machine Co., 1321 Racine St., Racine, Wis.

▲ For more details circle NED-454 J9 on enclosed inquiry slip ▲

New T&B PT66-M Sta-Kon® wire joints

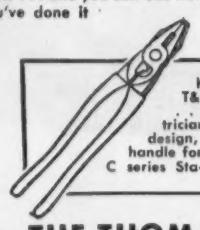
Pat. Pending

with *"See Through"* insulating caps— the fastest, neatest, most permanent way to do the job!

Easy as 1-2-3

1. Twist wires and insert into heavy-gauge bronze body
2. Apply staking pressure, then trim off excess wire.
3. Screw on transparent plastic insulating cap — the job is done . . . and you can SEE how you've done it

- small compact size
- brightly colored transparent cap can't vibrate loose . . . permits visual inspection of joint
- wide range — solid or stranded combinations up to 3-#12 AWG Max.

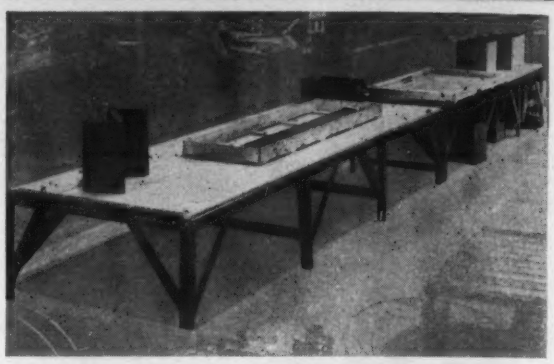


Heres the tool to use . . . T&B's new Sta-Kon *plus* Pliers . . . combines standard electrician's "side cutters" with a new design, wide-range installing die in handle for PT66-M and other A, B, and C series Sta-Kon connectors.

T 53

THE THOMAS & BETTS CO. INCORPORATED
24 Butler Street • Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P. Q., Canada

▲ For more details circle NED-455 J9 on enclosed inquiry slip ▲



Republic METAL LUMBER

solves shop specialty equipment problems

Republic METAL LUMBER® is the ideal building material for solving shop problems. Fast, economical, versatile —as easy to use for framing as common lumber. Strong, sturdy, steel. Delivered in bundles of ten pieces in 10-foot and 12-foot lengths. Call your Republic representative.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. • Canton 5, Ohio

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STOP LEAKS

SKINNER-SEAL PIPE JOINT CLAMP stops leaks at joints where pipe is screwed into fitting. Any temperature—any pressure up to 2,000 pounds. Saves the cost of tearing out and renewing leaky fittings. Prevents shutdowns. Order from your local industrial distributor!

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

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New OTC "Two-Stage" Hydraulic Pumping Unit

DELIVERS FROM 600 CU. IN./MIN. @ 100 P.S.I., TO 50 CU. IN./MIN. @ 10,000 P.S.I.

COMPACT, LIGHTWEIGHT; WEIGHS ONLY 45 LBS.

10¾" x 12⅝" AND 17½" HIGH

The amazing, new OTC "Vanguard" power package is a quiet-operating, precision-built, two-stage pump, driven by a universal motor and consisting of a gear pump and a five-cylinder axial-piston pump.

Top quality materials and workmanship assure efficiency and long life for maintenance, production and O.E.M. A variety of valves, controls and accessories are available.

For more information, write:

OWATONNA TOOL COMPANY
436 Cedar St., Owatonna, Minnesota

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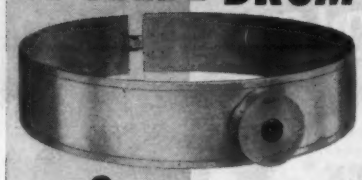
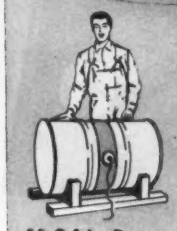
ACRA ELECTRIC DRUM HEATER



MELTS *Speeds up* SLOW FLOW MATERIALS



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MOLASSES—TARS—MANY OTHERS

SAVES TIME, MONEY, MATERIAL

Turns solid or slow flow materials into smooth flow liquids, quickly and completely emptied from their drums. Quick, easy, tight gripping on-off assured by spring actuated toggle clamp. 3 heat selector switch. Heaters used 1 or more to a drum.

55 GAL. Drum Heater #RH-1, shipping weight 10 lbs. $29.50

5 GAL. Drum or straight sided Pail Heater #PH-5—S/W 5 lbs. $16.75

FOB Chicago

PAYS FOR ITSELF IN HOURS
PAYS PROFITS FOR YEARS!

AC/DC Models for 3000 watts, 230 volts or 2500 watts, 115 volts. 5" aluminized steel heater band. Long life nickel-chrome heating element. Fully guaranteed against defects in material or workmanship.

ORDER DIRECT FROM
ACRA ELECTRIC CORPORATION
9907 Pacific Ave. • Franklin Park, Ill.

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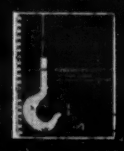
lifetime dependability with BERGEN'S PRECISION ENGINEERED STEEL CABLE ASSEMBLIES

Standard or custom designed wire rope or cable assemblies to meet special conditions of corrosion, abrasion, high temperatures, excessive flexing, etc.

Available in high carbon steel, stainless steel, monel metal, phosphor bronze, galvanized steel, nylon or plastic coated, to name a few.



Send for Assembly Catalog, CA-1

BERGEN WIRE ROPE COMPANY
502 GREGG STREET, LODI, N. J.
SPECIALISTS IN THE UNUSUAL

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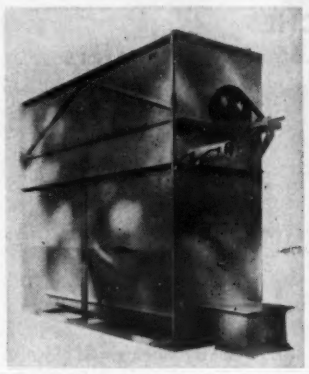
DISPOSABLE GLOVES
polyethylene type fit either hand

Hands can be protected from chemicals, powders, and resins by Wil-Gard clear polyethylene gloves, prepowdered with Bio-Sorb to make them easy to slip on and off. The five-fingered disposable gloves which fit either hand also safeguard precision parts from perspiration corrosion, yet do not sacrifice manual dexterity and touch sensitivity. Medium and heavy weights are offered in small, medium, and large sizes. Made by **Wilson Rubber Co.**, Industrial Div., 1200 Garfield Ave. S.W., Canton 6, Ohio.

▲ For more details circle NED-462 J9 on enclosed inquiry slip ▲

SURGE BIN
for continuous mixing operations



Used in conjunction with a horizontal mixer, this surge bin provides added capacity for the amount of space used. It bolts directly to the mixer frame, and the screw conveyor can be driven from the mixer by a shaft extension or by a separate drive. Three discharge gates, operated by a single air cylinder assure fast discharge from mixer to surge bin. Capacity is 310 cu ft with a 3-ton Marion mixer. Made by **Rapids Machinery Co.**, Marion, Iowa.

▲ For more details circle NED-463 J9 on enclosed inquiry slip ▲

DIAPHRAGM SEALS
high-temperature, long stroke type

Designed to be operated at up to 550° F, the Bellofram long stroke rolling diaphragm seal finds application in aircraft, missile, and industrial control and regulator uses. It is available in a range of elastomers, such as silicone compounds and Viton-A, which can be combined with glass fabric overlay for maximum temperature protection. High working pressures can be used in seal designs since only a fraction of the applied pressure is experienced as fabric stress. Sizes range from 1 to 6-in. diameters with up to 4-in. stroke. Four classes of mounting configurations are offered. Made by **Bellofram Corp.**, Burlington, Mass.

▲ For more details circle NED-464 J9 on enclosed inquiry slip ▲

PICK UP DANGEROUS METAL

from • Parking lots • Factory floors and aisles • Storage yards • Driveways • Docks • Inter-plant roadways • Railway sidings • Airport runways and aprons

with **DINGS Magnetic Sweepers**

Trailer-mounted Road Sweeper

Suspended Road Sweeper

Floor Sweeper

Here's the easy, economical way to prevent accidents to men and equipment. Pick up foot-entangling or tire-puncturing metal with the Dings non-electric Magnetic Sweeper model that best fits your needs.

Dings Road Sweepers, either trailer-mounted or suspended from any mobile equipment, are lightweight, waterproof, guaranteed permanent. Dings Floor Sweepers, also guaranteed permanent, are newly designed for quick, easy cleaning.

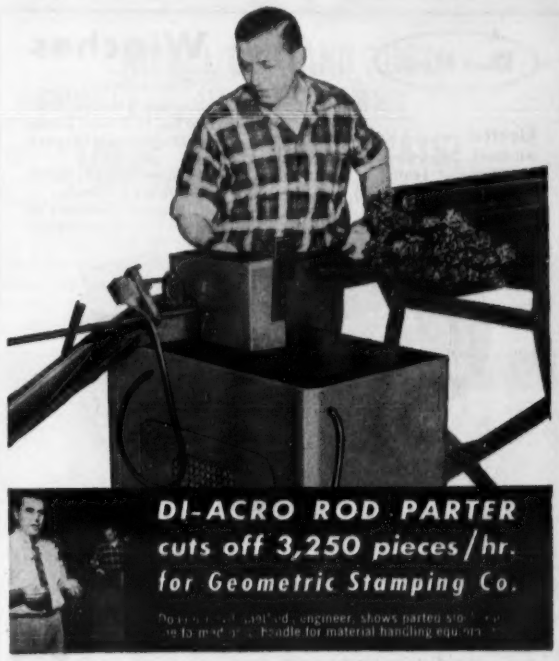
Write for Bulletins 1210-A-4 and B-1302-A today.

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave.
Milwaukee 46, Wisc.

Dings

S-158-1/9

▲ For more details circle NED-465 J9 on enclosed inquiry slip ▲



DI-ACRO ROD PARTER
cuts off 3,250 pieces/hr.
for Geometric Stamping Co.

About 1½ million pieces of bar stock are parted off each year on a Di-Acro Power Rod Parter at the Geometric Stamping Co. Div. of Euclid Stamping Co. in Cleveland. Twenty-foot lengths of 5/16" cold drawn steel are cut to 7" pieces at a rate of 3,250 pieces per hour.

"Instead of investing in a single purpose punch press die," says Donald Boyd, methods engineer, "We picked the power parter for its versatility. On this job and a variety of other work the power parter has increased production two times—it's actually twice as fast. Incidentally, there has been little or no maintenance other than periodic lubrication and resharpening of die heads."

For your bar stock up to ⅝" in diameter, investigate the Di-Acro Rod Parter. Speedmatic gauge cuts as fast as operator can feed. Minimum distortion—pieces can be threaded without de-burring. One standard die cuts eleven sizes of rod. Special square, hex and other heads.

DI-ACRO HAND OPERATED ROD PARTER

Same size-range and accurate parting as power parter. Ejectomatic gauge automatically clears die after each cut.

For free booklet, "Handy Guide to Rod Parters," consult yellow pages under Machinery—Machine Tools for your nearest Di-Acro distributor, or write us.

Find Us Fast In The Yellow Pages

pronounced die-ack-ro

di-acro

O'NEIL-IRWIN MFG. CO.
354 Eighth Avenue
Lake City, Minnesota

▲ For more details circle NED-466 J9 on enclosed inquiry slip ▲

NEW HIGHER PERFORMANCE FORMSPRAG OVER-RUNNING CLUTCHES WITH FORMCHROME* SPRAGS

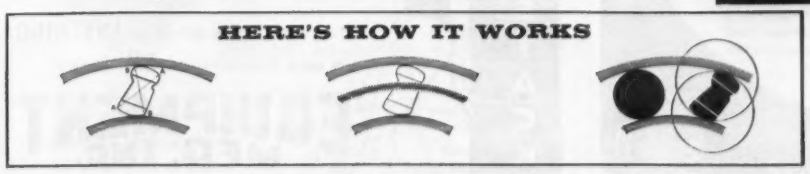
Greatest torque capacity for clutch size and weight, no measurable backlash, extreme precision and long trouble-free life have always been provided by Formsprag clutches. Now! The best over-running clutches provide even higher performance. For, they have Formchrome sprags that are corrosion resistant, and have high hardness and abrasion resistance similar to tungsten carbides. Result, sprag geometry is retained longer and clutches can be used on higher over-running speeds. For further information, send for technical paper "Formchrome Sprags". FORMSPRAG COMPANY, 23595 Hoover Road, Dept. 102, Warren (Detroit), Michigan.

*Formchrome sprags are produced under a patented process. The use of this process in the manufacture of over-running clutches is exclusive with Formsprag.

OVER-RUNNING
INDEXING
BACKSTOPPING

FORMSPRAG CLUTCHES
World's Largest Exclusive Manufacturers of Over-Running Clutches.

HERE'S HOW IT WORKS



Formsprag clutches have a full complement of sprags between concentric inner and outer races. Dimension AA is greater than BB. Rotation of one race in "driving" direction causes the sprags to wedge, transmitting full torque from one race to the other.

An energizing spring keeps the sprags in fight contact with both races . . . there is thus no lost motion. When force is applied to the driving member, the driving torque is instantaneously transmitted between races, slippage or backlash is eliminated.

The sprag is, in effect, a "roller" of larger diameter having greater contact surface, and more sprags can be inserted within a given diameter for greater torque capacity. Also, sprags engage at constantly changing contact points to prolong clutch life.

HIGHER PERFORMANCE ON TYPICAL APPLICATION

A Formsprag clutch with Formchrome sprags was installed in the reaction member of a torque converter and a competitive clutch in another. After the equivalent of one year of operation, the competitive clutch showed excessive wear. The Formsprag clutch run 50% longer and showed only negligible wear. There is a Formsprag clutch for your every need—send for free catalog.

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EXCLUSIVE* with Steinen

New Nozzles

TAN-JET
SOLID CONE NOZZLES
Non-clogging nozzles having a uniform solid-cone spray pattern, furnished in brass, steel, 303 stainless or other suitable materials for any application or process which involves spraying of fluids. Sizes ¼"—⅜"—½" male or female conn.

*SPAN-JET
FLAT SPRAY NOZZLES

For spraying or washing inside of tubular units or other uses where a circular wide-angle spray is needed. Made in two patterns — 160° hollow-cone spray or 180° flat — circular spray. Available in brass or 303 stainless steel — others on request. Sizes ⅛" — ¼" — ⅜" male conn.

Write for your FREE CATALOG TODAY

WM. STEINEN MFG. CO.
INDUSTRIAL NOZZLE DIVISION
39-45 Bruen Street, Newark, New Jersey
SERVING INDUSTRY FOR MORE THAN FIFTY YEARS

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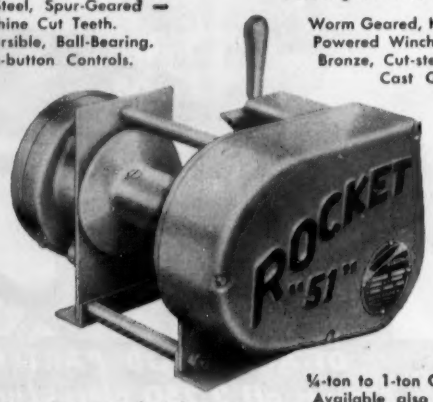
David Round

Winches

Capacities— Standard Models, from 500 lbs. to 5-tons. Larger sizes engineered to specs.

Electric — All-Steel, Spur-Geared — Machine Cut Teeth. Reversible, Ball-Bearing. Push-button Controls.

Worm Geared, Hand-Powered Winches — Bronze, Cut-steel or Cast Gears.



¼-ton to 1-ton Cap'y. Available also with Air Motor.

Efficient, low cost, handy power for a wide variety of hoisting and pulling jobs. Mechanically rugged, completely safe. For use with either 110 or 220 Volt, single or three-phase currents. Ask your distributor or write for catalog Bulletin 95-WI-5A.

DAVID ROUND & SON, INC., CLEVELAND 22, OHIO

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DEMING
ROTARY PUMPS

For Handling
Solvents • Fuel Oils
Lubricating Oils • Chemicals • Alkalies

The Deming Rotary Pump line is NOW available in sizes ranging from ⅜" through 8" for pressures to 200# and capacities to 1050 GPM.

The Deming Industrial Pump Line also includes:

- Vertical Turbine Pumps
- Multi-Stage High Pressure Vertical Centrifugal Pumps
- "Motor-Mount" Centrifugal Pumps
- Vertical Sump Pumps
- End-suction Centrifugal Pumps

For information and specifications write:

THE DEMING COMPANY
906 Broadway • Salem, Ohio

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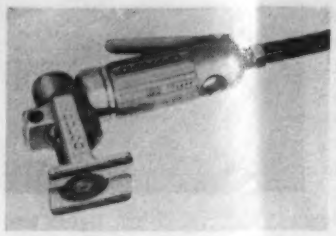
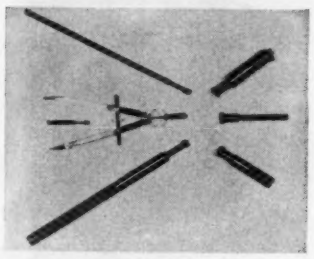
BLIND RIVET TRIMMER leaves smooth, shaved surface



Although designed for missile and aircraft work by the Northrup Corp., this blind rivet trimming attachment is also usable for industrial assembly work on trucks and trailers, electronic chassis, appliances, and other equipment. Large surface guide positions the circular saw properly and aids in moving it smoothly over the work surface without marring or gouging. Rivet stem is trimmed square. Tool is usable on universal, countersunk, and other fasteners. Attachment is shown on a right-angle Dotco pneumatic tool. It is available from **Doeden Tool Corp.**, Sherwood, Ohio.

▲ For more details circle NED-470 J9 on enclosed inquiry slip ▲

PORTABLE BROACHES for 0.250 to 0.6562-in. diameters



Maximum stock removal with extremely fine surface finish is achieved with 28 portable broaches designed for exacting, high production machining. A segmented helical pattern of cutting teeth generates the full diametral cut. These are followed by series of closely pitched teeth to produce the fine finish. Portable broaches are suitable for aluminum, steel, laminates, and a variety of materials in diameters from 0.250 to 0.6562 in. Made by **California Broach Co.**, 664 S. Anderson St., Los Angeles, Calif.

▲ For more details circle NED-471 J9 on enclosed inquiry slip ▲

DIAMOND WHEEL DRESSER has replaceable ¼-K diamond

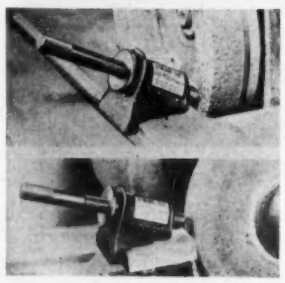


Plate mounted and pedestal type grinding wheels can be dressed and trued with the Dymond Cut wheel dresser. It is equipped with a replaceable ¼-carat diamond. Top photo shows typical dressing operation on silicon carbide plate mounted wheel, whereas in the lower picture, a pedestal grinding wheel is being trued. Made by **Last Word Sales Co.**, 18500 Mt. Elliott Ave., Detroit 34, Mich.

▲ For more details circle NED-472 J9 on enclosed inquiry slip ▲

THE LEADING "COMPLETE" LINE OF HOT STAMPING EQUIPMENT

Model No. 3 — For general purpose use (Manual)

Model No. 250 — For general purpose use (Power)

Model No. 2AH

HIGH SPEED AUTOMATIC PRODUCTION • SINGLE OR MULTI-COLOR •

Exclusive "Dwell" Control insures perfect marking •

Standard Feeds include slide chute, dial & magazine

Finest Precision engineered design and construction

Model No. 9AH — For peripheral marking (Automatic & Semi-Automatic)

Model No. 2AH — For high production (Automatic)

"The Original Marking Specialists"
The ACROMARK Company
7-11 MORRELL ST., ELIZABETH 4, N. J.
PATENTS, COPYRIGHTS AND TRADE MARKS REGISTERED U. S. PAT. OFF., WASH., D. C.

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a full line of PRECISION STAMPED GEARS

FASTEX* STAMPED GEARS

FREE!

Write today for this comprehensive catalog. Contains the full line of Fastex Precision Stamped Gears . . . plus useful tips on their use and application.

FASTEX 195 Algonquin Road, Des Plaines, Illinois
Division of Illinois Tool Works

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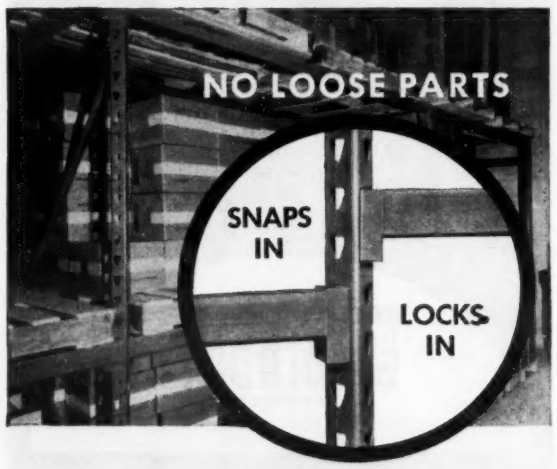
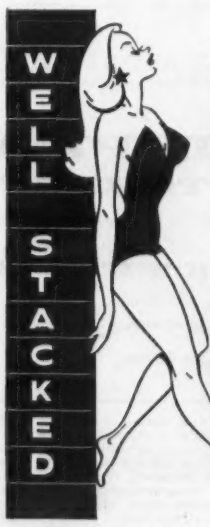
FAST!

EMI air-row head
FULLY ADJUSTABLE PALLET RACKS



★ EASY TO ERECT
★ ONLY 2 BASIC PARTS
★ SIMPLE TO ADJUST
★ QUICK TO RELOCATE



EMI AIR-ROW Head Racks easily adjust to stack pallets, skids, dies and bulk of varying heights. Upright frames are tied together with sturdy steel support beams which quickly snap into AIR-ROW slots in the vertical post. Forge lock fittings on the ends of the support beams insure positive self-locking engagement with no sway or pop-out.

WRITE FOR OUR COMPLETE CATALOG!

You can stack or ship ANYTHING in any industry on EMI racks*

EQUIPMENT MFG. INC.
21566 HOOVER ROAD
DETROIT 5, MICHIGAN

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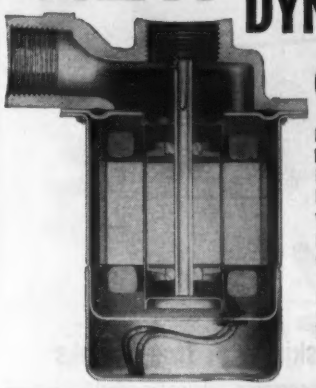
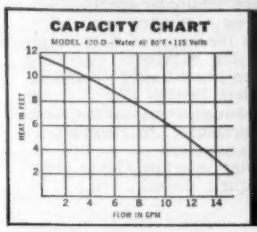
NEW Fostoria Seal-less DYNAPUMP only 6¾"



New multi-purpose, bronze-fitted seal-less Dynapump is less than half the size of pumps with comparable performance! See capacity chart.

MODEL 420-D—1" Connections—Pressure to 150 psi—Temp. to 220°F.



- No shaft seal to leak
- No spring coupling to break
- Bronze and stainless parts
- No lubrication needed
- Built-in overload protector
- Install in any position
- 5-year replacement warranty
- PRICED LOWEST OF ALL!

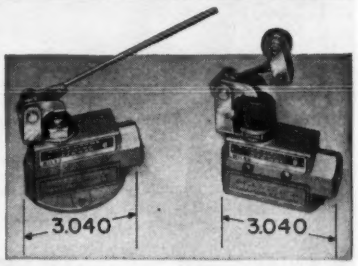
Dept. 908

Write for: Form 59-1-420
FOSTORIA CORPORATION
Dynapump Division, Fostoria, Ohio

▲ For more details circle **NED-476 J9** on enclosed inquiry slip ▲

MICRO SWITCH Precision Switches

2 new actuators added to enclosed switch line



MICRO SWITCH has added a six-inch rod actuator and a one-way roller actuator to its line of "E6" and "V6" snap-action switches.

The new rod actuator is designed for low-force applications such as sorting and counting. The roller lever is ideal for machine tools where a slide trips the switch from one direction only. These compact, single-pole double-throw switches are made for side mounting (E6) or bottom mounting (V6). Easy to wire, well sealed, lasting through millions of operations, these switches are listed by Underwriters' Laboratories for 15 amps, 120, 250, or 480 vac; ½ amp, 125 vdc; ¼ amp, 250 vdc. Send for Catalog 83.

MICRO SWITCH . . . FREEPORT, ILLINOIS
A division of Honeywell
In Canada: Honeywell Controls Limited, Toronto 17, Ontario

Honeywell
MICRO SWITCH Precision Switches

▲ For more details circle **NED-477 J9** on enclosed inquiry slip ▲

POWERFUL NEW PLUNGER CLEARS

CLOGGED TOILETS *in a jiffy!*

Clear messy, stuffed toilets Cut maintenance costs with

TOILAFLEX

Toilet ALL-ANGLE Plunger

Ordinary plungers don't seat properly. They permit compressed air and water to splash back. Thus you not only have a mess, but you lose the very pressure you need to clear the obstruction.

With "TOILAFLEX", expressly designed for toilets, no air or water can escape. The full pressure plows through the clogging mass and swishes it down. Can't miss!

Get a "TOILAFLEX" for your home too. Positive insurance against stuffed toilet.

- Double cup, double-pressure
- Tapered tail gives air-tight fit
- Designed to flex at any angle
- Centers, can't skid around

$2.65 Fully Guaranteed

Order from your Supplier of Hardware or Janitor Supplies

THE STEVENS-BURT CO., NEW BRUNSWICK, N. J.
A Division of The Water Master Company

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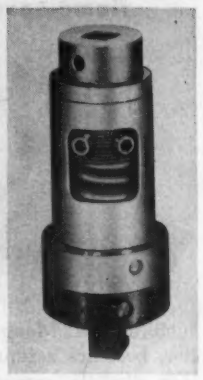
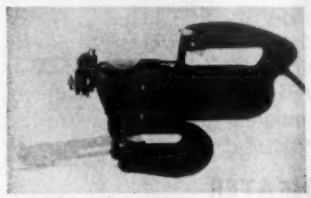
POWER TORQUE DRIVER
four sizes range up to 225 lb-ft



Torque is adjusted with an Allen wrench on the TitanTorker power torque driver. When desired torque is reached in driving an audible signal is produced as the internal balls are forced out of their sockets and overrun. Tool can be used with any motive power except impact wrenches. Four sizes provide maximum torques from 75 lb-in. to 225 lb-ft with female adapters in the driving head and male adapters on the torque base. Made by **Titan Tool Co.**, Main Street, Fairview (Erie County) Pa.

▲ For more details circle **NED-479 J9** on enclosed inquiry slip ▲

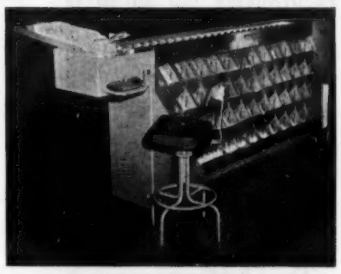
PORTABLE ELECTRIC PRESS
punches round, square, other holes



Usable to punch round, square, rectangular, or irregular shaped holes, this Modern Porta-Press is a 15-lb portable electric punch press. Punch and die are changed quickly for different shapes. Tool will punch up to ⅛-in. thicknesses of stainless steel, brass, plastic, and laminated or welded sheets. It plugs into standard electric outlet, and is easily manipulated with balanced handle. Made by **Modern Mfg. Co.**, 680 Davisville Rd., Willow Grove, Pa.

▲ For more details circle **NED-480 J9** on enclosed inquiry slip ▲

MAIL SORTER
handles 4500 pieces per hr



Designed primarily for industrial use, this Keytronic mail sorter will sort 4500 mailing pieces per hr as compared to 1500 pieces by manual methods. Mail is placed in feeding trough; operator reads destination by state, city, or zone; and punches the destination code on a typewriter-like keyboard. Piece is automatically conveyed and dropped into one of 44 receiving bins. Each bin holds about 180 mailing pieces. In two passes through machine, it is possible to sort into 1936 divisions. Various models handle pieces from 4¼ x 11 down to 2¾ x 4 in. with maximum thickness of 3/16 in. Made by **Universal Business Machines, Inc.**, Box 5183, Columbia, S. C.

▲ For more details circle **NED-481 J9** on enclosed inquiry slip ▲

LOCK-GRIP PLIER

Pat. No. 2,766,646

LOCKING KEY FREES BOTH HANDS: Pushing the locking key forward automatically locks the jaws. Jaws released instantly by pulling back on the locking key.

New multi-purpose tool to pick up and grasp small parts for soldering or other operations; as a vise to free both hands; to secure rivets; to cut small wire; to strip insulation; as a brad or staple setter.

ONE HAND ACTION: Quick one-hand adjustment for size and lock-up leaves the other hand entirely free.

No. 800 .....$4.50

New Catalog of X-ACTO PRECISION HAND TOOLS for INDUSTRY. FREE on request.

At your ELECTRONIC PARTS JOBBER or order direct.

Multi-Purpose Tool serves as:

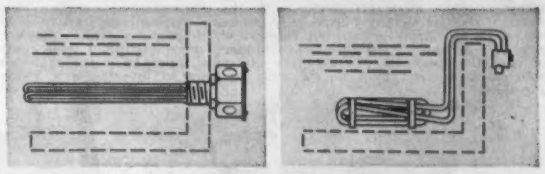
(1) Plier
(2) Vise
(3) Stripper
(4) Crimper
(5) Tweezer
(6) Wrench
(7) Heat Sink

HANDICRAFT TOOLS, INC.
a division of **X-ACTO, INC.**
48-416 Van Dam St., L. I. C. 1, N. Y.

▲ For more details circle **NED-482 J9** on enclosed inquiry slip ▲

For fast heat, For clean heat . . .

Build heat into your product or process with General Electric immersion heaters



For heating liquids in your processing equipment or in your products no other method offers the cleanliness, speed and selectivity made possible by immersion heaters from General Electric.

You get all the heat: Because these heaters can be placed right in the liquid you get maximum efficiency. Heat losses to surrounding atmosphere are reduced. Working conditions are more comfortable.

Fire hazards reduced: Safer, quicker electric heat eliminates danger of open flame, inconvenience of smoke and fumes.

You get accurate control: To give you quick heat regulation for changing conditions, precise thermostat controls are available.

FREE BULLETINS

For more information, write Section 723-30, General Electric Company, Schenectady 5, N. Y., and ask for GEA-6305, HEATING WATER AND PLATING BATHS; GEA-6306, HEATING OIL; and GEC-1005 CATALOG OF GENERAL ELECTRIC HEATERS AND DEVICES.

GENERAL ELECTRIC

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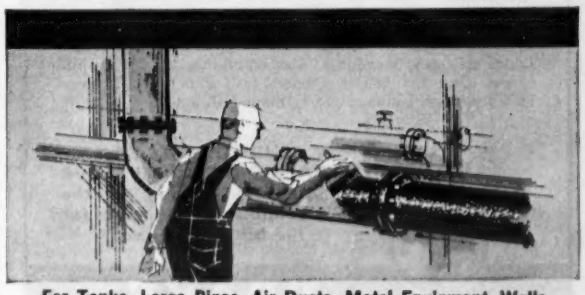
END ALL DRIP AND RUST PROBLEMS IN YOUR PLANT THESE TWO PROVEN WAYS!

Industrial plants know Mortell products offer more positive protection than any other drip-and-rust preventive. Maintenance men know that paints or compounds of paint and fish oil provide little or no permanent protection. Rust-inhibiting NoDrip Plastic Coating is a moisture-proof insulation that *does* stop condensation . . . forms a seamless jacket . . . *does* stop corrosion. NoDrip Tape, with its triple insulating barrier, is equally dependable.



For Tanks, Large Pipes, Air Ducts, Metal Equipment, Walls, Ceilings, Permanently End Condensation Drip, Rust and Corrosion With NoDRIP PLASTIC COATING

The heavy consistency of NoDrip outlasts many coats of paint or ordinary rust-preventives. Permanently insulates and protects. Applies easily with trowel, brush or special spray. Non-toxic, odorless and non-flammable. Resists acid, alkali, brine solutions or vapors. Available in 1, 5 and 55 gallon drums.

For Smaller Pipes or Tubing, Permanently End Condensation Drip, Rust and Corrosion With NoDRIP TAPE

An easy-to-use, wrap-around pipe covering, perfectly pliable, cork-filled, completely self-adhering. Forms an air-tight, 100% vapor- and moisture-proof jacket. Fits snugly even around tees, unions, angles, valves. Cuts maintenance costs—makes out-of-the-way storage areas useable—ends slip and slide floor hazards. No need for vapor seals, brads, fasteners or tools of any kind.

At all leading hardware, mill supply and plumbing jobbers. For complete information and technical handbook, write

Mortell COMPANY
526 Burch Street · Kankakee, Illinois

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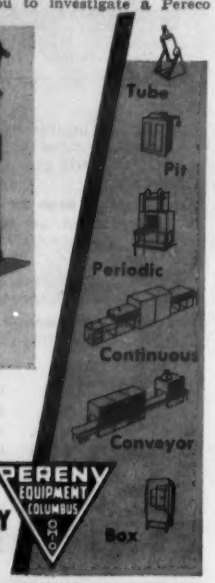
completely packaged

PERECO *Electric* FURNACE

for shop or laboratory uses

Treating high-speed steel—in Philippines or Pittsburgh—is just one of the jobs—reported by users from all points of the globe—which are being handled more efficiently with the accurately controlled, clean electric heat of Pereco Furnaces. Also more economically! And the FG Series Pereco Unit (illustrated below), with operating temperatures to 2500° F., is only typical of many standard models—with a wide choice of controls—available for handling different types of work. Whatever your furnace need may be, it will pay you to investigate a Pereco Furnace.

FG Series Available in a number of sizes



NOW AVAILABLE

Kanthal-Super Element equipped Pereco Furnaces and Kilns for continuous operation at temperatures up to 3000° F. in oxidizing atmospheres. Write for details.

PERENY EQUIPMENT COMPANY

Dept. G, 893 Chambers Rd., Columbus 12, Ohio
Export Office: Ad Auriema, Inc., 85 Broad Street, New York 4, N. Y.

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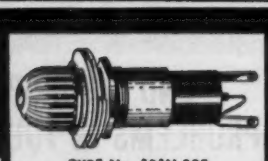
Now—*20 TIMES BRIGHTER* Neon Indicator Light Assemblies!



TYPE No. 101N-022

This DRAKE Assembly — No. 101N-022 — is ideal for use with the new G.E. NE-51H High Brightness Neon Glow Lamp, for 125V AC operation. According to the manufacturer, the lamp gives 20 times more illumination than old style neons. Since useful life is 5000 hours, replacement is made easy with Unit No. 101N-022; bulb flickering warns of time to change. Less than ¼ watt power required for operation.

No. 101N-022 has built in 22,000 ohm resistor — is available with plain or fluted glass or plastic domed lenses, solder or screw terminals. Also available for 250V application (Unit No. 101N). Commercial units are UL listed. This style can be supplied to meet MIL specs.

DRAKE

★ *SEND FOR FREE SAMPLE, DATA SHEET, and Quick-Reference Catalog of other Assemblies and Lampholders in the big DRAKE line.*

DRAKE MANUFACTURING COMPANY
4624 N. OLCOTT AVENUE • CHICAGO 31, ILLINOIS

MINIATURE LIGHTING SPECIALISTS

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Clean Goggles, Face Shields FAST!

AO 102 POWDERED DETERGENT with DISPENSER

Both a germicide and detergent in convenient powder form. Can't break, can't freeze. Cleans, sanitizes face shields, helmets, goggles, respirators. NO STIRRING — POWDER DISSOLVES FAST. One oz. dilutes to 1 gal. Packed in 25 one-oz. envelopes per carton. 25 packages to shipping carton which fits handy wall type (102D) dispenser. Your nearest AO Safety Products Representative can supply you.

Always insist on Trademarked Safety Products

American Optical COMPANY SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASS. *Safety Service Centers in Principal Cities*

▲ For more details circle NED-487 J9 on enclosed inquiry slip ▲

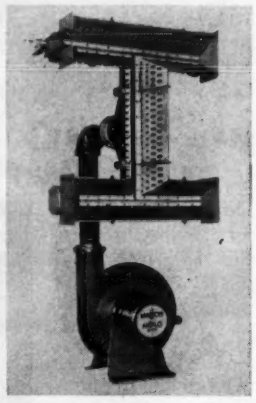
HIGH TEMPERATURE TORCH develops 2500 to 12,000° F for flame-spraying refractory materials

Powered by a standard welding generator, this plasma generator becomes a high temperature torch for flame-spraying refractory oxides and ceramics onto other materials. It develops from 2500 to 12,000° F and can be fired into a vacuum or pressure chamber without major modification. Material is fed into the flame as a powder, becomes a liquid, and is sprayed in fine droplets. The slightly porous coating deposited improves the specimen's thermal insulating properties and resistance to thermal shock.

The high intensity electric arc consists of a water cooled tungsten cathode and a copper anode. Argon, nitrogen, or helium gas, plus cooling water, are needed. It is 2¼ x 9 in. and weighs 3½ lb. Changing nozzles varies the jet from 0.25 to 0.50 in. ID. Pistol grip handle and stand mounting are offered. Made by **Avco Mfg. Corp.**, Avco Research & Advanced Development Div., 201 Lowell St., Wilmington, Mass.

▲ For more details circle NED-488 J9 on enclosed inquiry slip ▲

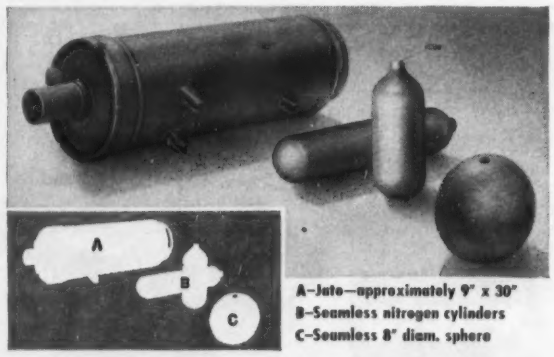
INDUSTRIAL AIR HEATER for drying, baking, and curing mounts directly in air stream



Extreme flexibility of temperature and heat output is provided by the 25-to-1 throttling range of this Airflo gas burner system. It is suited for industrial drying, baking, and curing processes involving hot air in motion. It uses some oxygen from the stream of air being heated in either recirculating or single-flow systems. In addition to its use on ovens, kilns, and dryers, it can be installed to heat make-up air to replace that lost through exhaust from equipment, stacks, or leakage from plant.

The Line Burner with its steel mixing plates mounts in the duct carrying the stream of air to be heated. A properly proportioned air-gas mixture is delivered to the burner from a mixer mounted outside the duct. Single lever operation facilitates automatic control. Line Burner assemblies are made up of individual elements to any required size and shape with capacities ranging to 8 million or more Btu/hr. Made by **Maxon Premix Burner Co.**, 201 E. 18th St., Muncie, Ind.

▲ For more details circle NED-489 J9 on enclosed inquiry slip ▲



A–Jute—approximately 9" x 30"
B–Seamless nitrogen cylinders
C–Seamless 8" diam. sphere

We give shape to your ideas

If you have an idea for component parts, bring it to our design engineers for a check-out. The chances are Hackney methods can improve appearance and help cut production costs.

Hackney seamless parts are deep drawn cold from circular blanks. Lighter than castings or forgings, Hackney shapes can be "ironed" to close sidewall and diameter tolerances.

These Hackney shapes and shells are spherical, cylindrical, conical, tapered. Sizes: 1 qt. to 100 gal. Diameters: 3" to 32". Wall thickness: for working pressures of 100 to 6000 psi. Made in steel, nickel, magnesium, the new ultra-high-strength stainless steels, hot work tool steels, molybdenum and titanium.

For help with your ideas, write to the address below.

Hackney MILWAUKEE

Pressed Steel Tank Company
Manufacturer of Hackney Products
1450 South 66th Street, Milwaukee 14, Wisconsin
Branch offices in principal cities

CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

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HANDY SELECTION GUIDE GIVES ROTAMETER SPECIFICATIONS WITH JUST A TURN OF A DIAL

yours for the asking . . . from Brooks

Now you can quickly compare rotameter specifications to find the correct model for any particular application. You simply set the chart dial at the required flow range; other essential data — model, size, maximum operating temperature and pressure — are immediately presented.

The Guide covers the complete Brooks line . . . includes everything from rugged armored meters for large flows, high temperatures and pressures, to "miniature" purge meters for small-flow measurement.

You'll find the Brooks rotameter Selection Guide genuinely useful. To get a copy, request Bulletin 110.

BROOKS ROTAMETER CO.
959 K Street Lansdale, Pa.
B.A. 1990 *Specialists in Complete Rotameter Instrumentation*

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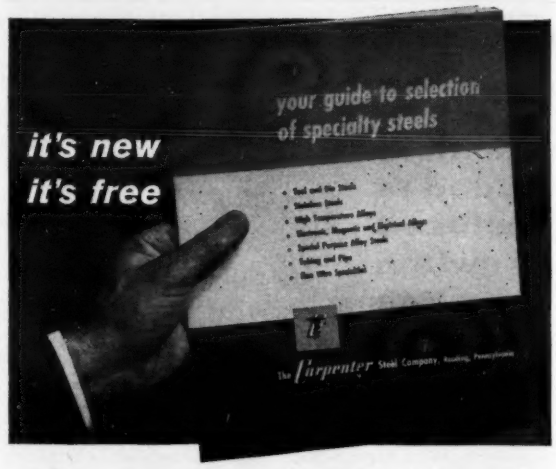

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The Carpenter Steel Company
118 W. Bern Street Reading, Pa.

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THESE MUELLER BRASS CO. ENGINEERING MANUALS help you select the best materials and best methods of fabricating a product

Mueller Brass Co. engineers have carefully selected and compiled the data contained in these technical manuals. Send for any or all of the free manuals that interest you; check appropriate box, clip out and mail with your return address.

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- ☐ 600 SERIES BEARING ALLOYS
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- ☐ COLD-PREST IMPACT EXTRUSIONS
- ☐ SINTEEL POWDER METAL PARTS
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MUELLER BRASS CO. PORT HURON 37, MICHIGAN

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Cut fastening costs with PASLODE STAPLERS

On production lines: Used profitably in nearly every industry in manufacturing, assembly and shipping. Fasten wood, cloth, aluminum, hardboard, screen cloth, plywood and hard fibreboard.

In shipping rooms: Use to assemble cartons, drums, packing fillers, liners, etc.; to close bags, drums, corrugated containers; to fasten shipping tags, assembly instructions, moisture collectors.

There's a dependable Paslode hand or pneumatic stapler to help you cut costs. Send for description and prices today.

PASLODE COMPANY
Division of Signode Steel Strapping Company
5860 Northwest Highway, Dept. ED, Chicago 31, Ill.

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BOWSER PORTABLE WHEEL TANK

TRANSPORTS LIQUIDS . . . . QUICKLY . . . . SAFELY

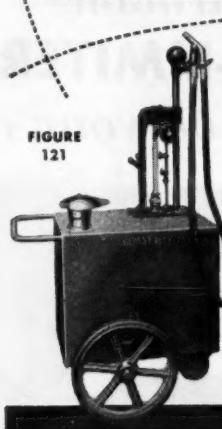


FIGURE 121

DISPENSES AND REGISTERS
Gallons, ½ Gallons, Quarts, Pints

Oils, solvents, process liquids . . . are all transported quickly, easily, safely . . . and dispensed accurately in controlled quantities. A piston-type measuring pump with counter records up to ten gallons and repeats or resets. Protecto-Seal fill-and-vent with built-in flame arrestor assures safe handling of flammable liquids. Anti-drip nozzle. 50-gallon tank. Convenient delivery hose.

ALSO AVAILABLE . . .

Figure 63	Figure 172	Figure 41	Figure 109
Measures quart, pint, or ½-pint. Anti-drip nozzle. Pump is lockable. 65-gal. tank.	Completely enclosed. Hinged, lockable cover. Same pump and tank as Figure 63.	Floor stand pump for low-level tanks. Measures gals., ½ gals., qts., pints. Lockable.	Dispenses and records gal., ½ gal., qt. and pt. quantities. 65 or 120-gal. tank.

BOWSER, Inc., 1381 EAST CREIGHTON AVENUE FORT WAYNE, INDIANA

▲ For more details circle NED-495 J9 on enclosed inquiry slip ▲

VIBRA-WASHER

. . . THE COMPLETELY NEW AUTOMATIC PARTS WASHER AND METAL CONDITIONING MACHINE

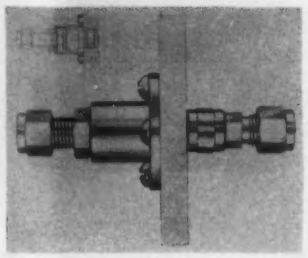
- Labor saving
- Automatic unloading
- For single or multi-stage operations
- No nesting of parts during cleaning or conditioning cycle
- Adjustable capacities to 10,000 lbs. per hour

The versatile new Simplicity VIBRA-WASHER, revolutionary machine for washing and conditioning of small metal parts, stampings and castings, employs a vibrating work carrier that automatically conveys parts through cleaning or conditioning bath. Solution is forced around parts, even into blind drillings and slots. In single stage, VIBRA-WASHER removes chips, oil and grease quickly . . . economically. In multi-stage, several units in line will provide cleaning, rinsing and phosphating, eliminating "between-stage" handling. Write today for Bulletin 107, to: Industrial Washer Division.

Simplicity TRADE MARK REGISTERED
212 ENGINEERING COMPANY • DURAND 15, MICH.

▲ For more details circle NED-496 J9 on enclosed inquiry slip ▲

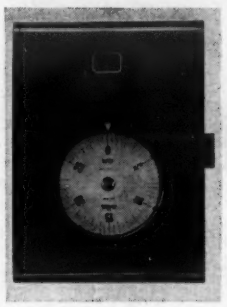
QUICK-CONNECT ADAPTER
allows flush mounting on panels



Flanged adapter unit for flush rear mounting of Swagelok bulkhead quick-connect fittings on instrument panels achieves a uniform and attractive appearance. There are no projecting parts of the quick-connect, and possibility of defacing the panel board is minimized. These flush-mount flanges will fit ¼ and ⅜-in. bulkhead fittings. Made by Crawford Fitting Co., 884 E. 140th St., Cleveland 10, Ohio.

▲ For more details circle NED-497 J9 on enclosed inquiry slip ▲

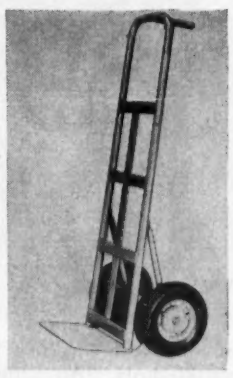
TIME-CYCLE CONTROLLER
time-controls up to 10 variables



Improved Model C1C500 time cycle controller can time-control up to ten different variables in tire pressing, dyeing, water conditioning, or batch processing operations. Ten pilots, pneumatic, electric, or a combination, can be operated simultaneously, or in any sequence. Each pilot performs up to 24 functions. Intervals between operations can be as brief as 4 sec. Timing discs range from 0-15 to 0-360 min. Unit can be equipped with standard or high-capacity pneumatic pilots, single-pole or double-pole double-throw switches, or special-purpose switches. Made by Bristol Co., Box 1790, Waterbury 20, Conn.

▲ For more details circle NED-498 J9 on enclosed inquiry slip ▲

HAND TRUCKS
have 10 x 2.75 in. tires



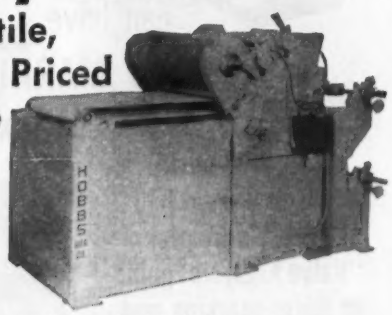
Line of material handling trucks includes this Utility one-hand operated unit fabricated of 1-in. high tensile steel tubing. Light and easy to handle, trucks are equipped with 10 x 2.75-in. pneumatic or semipneumatic tires. Axles are positioned for easy maneuvering over curbs and obstructions. Thin toe-plate is also of high tensile steel. Trucks are finished in orange enamel with red wheels. Prices are $17.45 and $23.84, depending on tires. Made by Master Tank & Welding, Box 5146, Dallas, Tex.

▲ For more details circle NED-499 J9 on enclosed inquiry slip ▲

New HOBBS Rotary Cutter

613-G

A Versatile, Medium Priced Machine



This latest addition to the Hobbs line of cutters, slitters and winders will cut from independent rolls or in synchronization with other machines. It is available in widths from 24 to 60 inches and provides infinitely variable cutoff lengths from 2 to 60 inches, at speeds up to 50 cuts per minute.

Longitudinal slitting device is optional and accessory equipment includes unwinding stands, run-out conveyors and stackers. Price, without accessories — $5000. to $9000., depending on width of unit.

HOBBS Manufacturing Company
41 1 Salisbury St., Worcester 5, Mass.
EST. 1882
Branch offices and Sales representatives in Irvington, N. J., Cleveland, Chicago, Greenville, Louisville, Toronto and other major cities

WINDERS • HAND & POWER SHEARS • SLITTERS
DIE PRESSES • ROTARY & AUTOGIL CUTTERS

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YOUR BEST MOVE IS TO MOVE WITH MERRILL
MATERIAL HANDLING DEVICES

For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.

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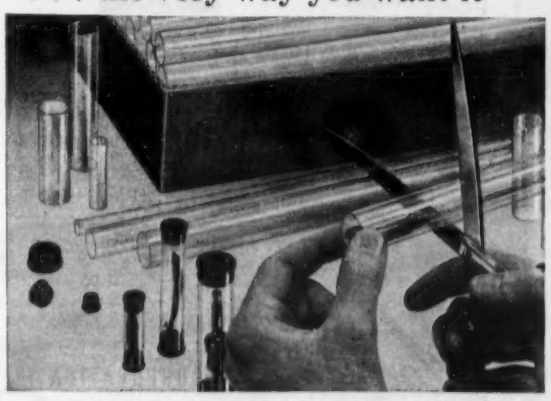
PACKAGING

at your finger tips . . . with
CLEARSITE® TUBING
. . . the very instant you need it
. . . the very way you want it



—with your own supply of Clearsite flexible tubing and polyethylene plugs.

—the fast, perfect, economical way to protect small products.

Make a wide variety of containers to your exact needs. Simply snip off a length of tubing, insert a plug, the item and the other plug . . . and you've got a professional container! End makeshift packaging methods. Order a supply of Clearsite tubing and plugs today.

Diameter	Tubes per Carton	Price per Carton	Plug Price per M*
⅜"	420	$18.00	$3.00
½"	306	15.00	3.40
7/16"	258	13.50	3.50
⅝"	206	13.50	3.75
¾"	144	10.50	4.25
⅞"	91	9.00	4.50

Tubes of all diameters are 18¼" long.

*Minimum Order

THE WIDEST VARIETY OF STOCK PLASTIC JARS AND VIALS AVAILABLE ANYWHERE

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Please send us a free sample of . . . . . inch tubing and plugs to fit.

Please enter our order attached.

Name . . . . . Title . . . . . .
Company . . . . . .
Address . . . . . .
. . . . . .
. . . . Check is enclosed . . . . Invoice us

▲ For more details circle NED-502 J9 on enclosed inquiry slip ▲

NOW... simple, economical
2-WAY RADIO...

GONSET G-11
Citizens' Communicator

Newly assigned by FCC... 11 meter Citizens Band for virtually unlimited private or business use. No license exam. U.S. Citizens merely complete simple FCC form.

Gonset's full-feature Citizens Band Radio G-11, is available for use on tractors, earth-moving equipment, trucks, jeeps, autos, boats, planes and fixed stations. FCC type accepted.

Unit is rugged, dependable. No tuning—is fully crystal controlled for highest stability. Has noise limiter, adjustable "squelch" for muted standby, simple press-to-talk operation. 3-models: 6V DC, 12V DC and 115V AC. Price includes microphone, crystals. (1 channel)

124.50 per unit

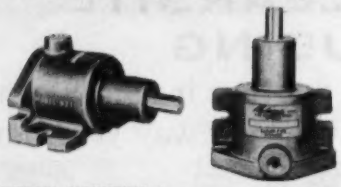
Write today for free brochure and booklet, "11-meter Citizens' Band Radio"

GONSET
Division of Young Spring & Wire Corporation
501 SOUTH MAIN ST., BURBANK, CALIFORNIA

▲ For more details circle NED-503 J9 on enclosed inquiry slip ▲

Modernair
CLAMP-TYPE AIR CYLINDERS

Easiest to install or relocate!



UNIVERSAL MOUNTING for easy vertical or horizontal installation.
SLOTTED MOUNTING HOLES save installation, relocation time.
SPRING-RETURN TYPE CYLINDER operates from simple 3-way valve (MODERNAIR CRV or BV series recommended). Has 1/8" NPT port.

ECONOMICALLY PRICED, TOO!

Bore Size	Price (f.o.b. factory) 1" Stroke	2" Stroke
1⅛"	$ 8.50	$ 9.75
2"	16.00	19.00
3"	23.50	26.50

Write TODAY for Free Literature!

Modernair **CORPORATION**
Dept. F9, 400 PREDA ST., SAN LEANDRO, CALIF.
5007 Brookpark Rd., Cleveland 34, Ohio

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VARGLAS SILICONE RESIN "500" SLEEVING

So flexible you can get it on spools or in coils!

FLEXIBLE—at −70° to +500° F. without cracking or checking. Dielectric strength remains.
DIELECTRIC STRENGTH up to 7000 V., even when knotted. Meets MIL-I-3190, revised.
RADIATION RESISTANT — remains nonconductive under higher random intensities.
SIZE AND COLOR CODES—.010" to 3" I. D., in 12 brilliant, non-fade colors.
CHOICE OF LENGTHS—continuous lengths to 5000'; 36" lengths where preferred.
IMMEDIATE DELIVERY on standard items from stock . . . 48 hr. for new production.

Ideal where miniaturization increases heat and dielectric load on small wires.

● *Send for free test samples*

Varflex SALES CO., INC.
"Never Satisfied Until You Are"
Manufacturers of Electrical Insulating Tubing and Sleeving
310 N. Jay St., Rome, N. Y.

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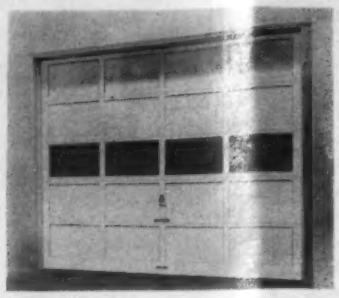
INDUSTRIAL DOORS
in 6-ft 4-in. to 16-ft 3-in. widths



Wide or narrow panel models in the Pacemaker line of low-cost commercial and industrial overdoors are available in widths from 6 ft 4 in. to 16 ft 3 in. Stiles and rail members are 1¾ in. thick. Four section doors are equipped with through shaft counterbalance, while doors with five or more sections are arranged with twin torsion springs. Heavy gage tracks are supported with cantilever brackets. Glassed or solid sections are available. Made by McKee Door Co., Dept. ECT, Aurora, Ill.

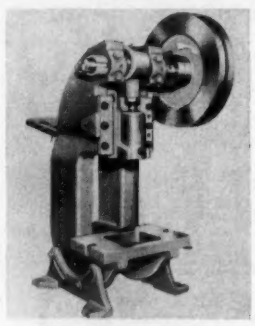
▲ For more details circle NED-506 J9 on enclosed inquiry slip ▲

TORQUE TRANSMITTER
operates in −57 to 125° C range

Hermetically sealed torque transmitter will transmit rotary motion through a positive metal-to-metal seal by means of a flexible metal bellows. Electrical, mechanical and hydraulic controls, instruments, and switches can be regulated from outside a sealed area by means of this unit. It weighs 0.87 oz, measures ¾ in. diameter by 2½ in. long, has a minimum life of 100,000 revolutions, and operates in −57 to 125° C range. Input and output shafts are ball-bearing mounted. Custom designs are also available. Made by **Hoffman Electronics Corp.**, Hoffman Laboratories Div., 3740 S. Grand Ave., Los Angeles 7, Calif.

▲ For more details circle NED-507 J9 on enclosed inquiry slip ▲

OBI BENCH PRESS
develops 5 tons with 1/3 hp motor



Economical 5-ton Series 40 OBI bench press operates at 280-290 strokes per minute with a ⅓-hp, 1725-rpm motor. Standard stroke is 1 in. with a 7½ in. shut height, although 1¼, 1½, and 2-in. strokes are also available. Ram has 1-in. adjustment and is equipped with a 1-in. hole for tooling. Center of slide to frame measures 4 in., and bed area is 6¼ x 10 in. By removing one bolt, ram can be made to run continuously. An adjustable brake on the crankshaft is standard. Made by **Benchmaster Mfg. Co.**, 1835 W. Rosecrans Ave., Gardena, Calif.

▲ For more details circle NED-508 J9 on enclosed inquiry slip ▲

The average plant can have 49 MARKING JOBS that cost extra money!

Send for a copy of Weber's helpful "Value Analysis" guide to lower marking and addressing costs!

Here is an especially prepared booklet that can help you solve marking problems facing your company. It pinpoints 49 places where Weber Marking Systems speed up production line marking, shipment addressing, etc.

Shows how to save time and materials, reduce errors without disturbing a single work routine. It is a useful guide to "where" and "how" your company can cut costs and improve efficiency in multiple marking and addressing everywhere in the plant.

Write for your copy today!

Weber
MARKING SYSTEMS
Sales and Service in all principal cities

WEBER MARKING SYSTEMS, INC.
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Weber Industrial Park
Mount Prospect, Illinois

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WORK-O-MATIC DROP-BOTTOM BOX AN POSITIONING STAND

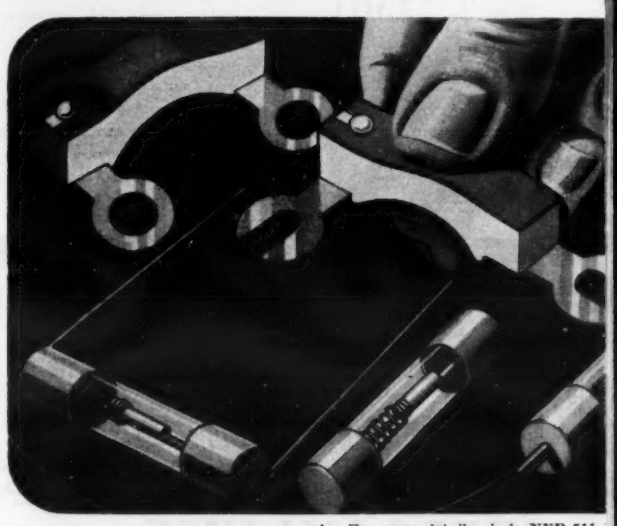
Partners in handling Simplification

For details, request Catalog No. 89.
The Union Metal Manufacturing Company,
Canton 5, Ohio

UNION METAL
Material Handling Equipment

▲ For more details circle NED-510 ▲

If overheating can cause trouble—
BUSS HEAT-LIMITERS
may be your ans

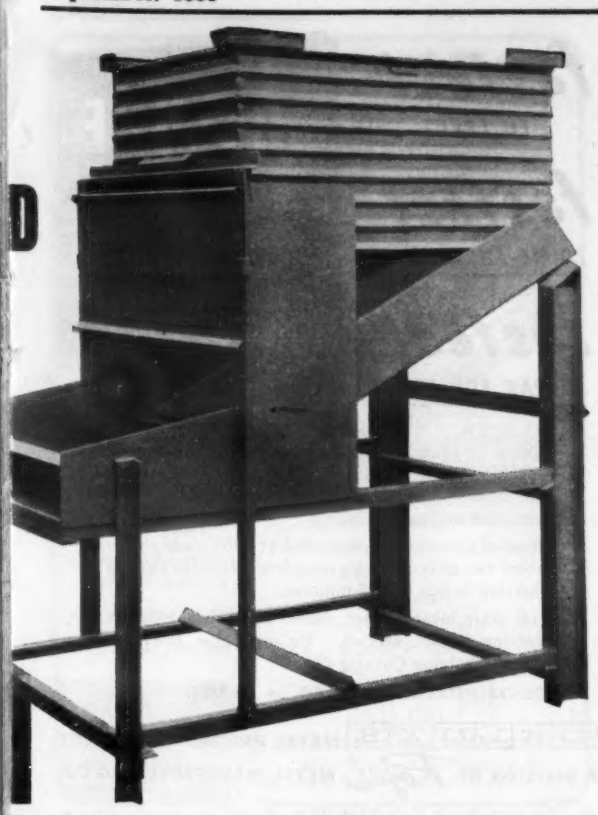


▲ For more details circle NED-511 ▲

The Authorized **S**

Spherical, Cylindrical, Ball, and "Tyson" Tapered Roller Bear

▲ For more details circle NED-512 ▲



J9 on enclosed inquiry slip ▲

Typical applications for BUSS Heat-Limiters are: hair driers, air conditioners, hot lacquer sprays, refrigerator defrosters, ovens, cookers and other devices or apparatus where excessive heating or failure of temperature control might cause trouble or a hazard.

How BUSS Heat-Limiters operate: A BUSS Heat-limiter has a thermal cut-out that opens the circuit if anything causes the temperature to rise above its opening point.

swer!

Where thermostats are used, BUSS Heat-Limiters provide ideal back-up protection should the thermostat fail for any reason.

BUSS Heat-Limiters are available in many types and in many styles of terminals to suit requirements.

Tell us your problems and let BUSS engineers work with you to help solve it.

For more information write for bulletin PRO-1 . . . Bussmann Mfg. Division, McGraw-Edison Co., St. Louis 7, Mo.

BUSS *Safety-Valve* **HEAT LIMITERS**

Another outstanding development by the makers of BUSS FUSES 959

J9 on enclosed inquiry slip ▲

SKF *Distributor carries a full line of bearings*

He can give you immediate delivery of almost any bearing—because he carries all types in countless sizes in his local stocks.

And if he should be "out," there's a nearby SKF regional warehouse that is completely stocked to back him up. So, why not consider his full line as your inventory and call him first? 5907

EVERY TYPE—EVERY USE

SKF®

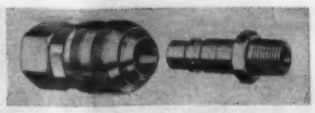
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

ings

*REG. U. S. PAT. OFF.

J9 on enclosed inquiry slip ▲

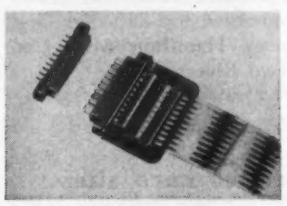
AIR HOSE COUPLING shuts off air when disconnected



Slight pull on the knurled sleeve of the Flex-O-Matic air hose coupling disconnects socket and plug, automatically shutting off the air. A straight push connects the plug, locking it firmly in the socket, regardless of air pressure. Swivel action prevents hose kinking, and a seal prevents leakage. Air passage is unrestricted. Coupling is offered in sizes for 1/4, 3/8, 1/2, and 3/4-in. ID hose. Made by **Lincoln Engineering Co.**, 4010 Goodfellow Blvd., St. Louis 20, Mo.

▲ For more details circle NED-513 J9 on enclosed inquiry slip ▲

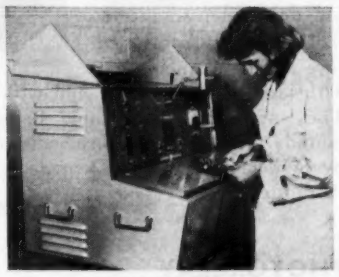
FLAT WIRING CONNECTOR has insulated strain relief handle



Both rack-and-panel and cable-to-cable connections can be made with the in-line Plyo-Duct connector for film insulated flat conductor wiring. Illustrated plug-in unit incorporates an insulated strain relief handle which mounts on either male or female connectors. Made by **Methode Mfg. Corp.**, 7447 W. Wilson Ave., Chicago 31, Ill.

▲ For more details circle NED-514 J9 on enclosed inquiry slip ▲

DESOLDER-SOLDER DEVICE for repair and salvage of printed wiring assemblies



Rejected printed wiring assemblies can be desoldered, defective components removed, and solder joints remade with this induction desoldering and soldering device. Operated manually or automatically, the semiportable unit has a heat-extract sequence for desoldering and a heat cycle for soldering.

Work is placed over an electrically isolated, low-voltage induction work coil. Spotlight on console helps operator locate point where heat should be applied. Heat is delivered only to the solder joint through the work coil. Solder is removed in the "extract" part of the sequence, leaving a clean, pretinned junction for replacement with a new component.

By resetting a toggle switch, device is ready to reheat the clean joint. Solder is added manually. Unit weighs 250 lb and requires power input of 110-v, 60 cycles, single-phase, 2 kva. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle NED-515 J9 on enclosed inquiry slip ▲

Scissors-Action gives

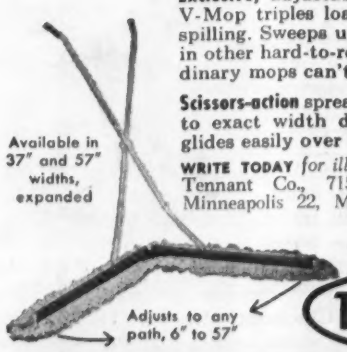
Tennant V-Mop *Triple Capacity*

Fully expanded mop sweeps 57" path

Exclusive, adjustable-width TENNANT V-Mop triples load capacity without spilling. Sweeps under low desks, and in other hard-to-reach areas where ordinary mops can't reach.

Scissors-action spreads TENNANT V-Mop to exact width desired. Works fast; glides easily over floor.

WRITE TODAY *for illustrated bulletin.* G. H. Tennant Co., 715K N. Lilac Drive, Minneapolis 22, Minn.



Available in 37" and 57" widths, expanded

Adjusts to any path, 6" to 57"

PATENT NO. 2,756,453

TENNANT

SPECIALIZED MAINTENANCE EQUIPMENT

▲ For more details circle NED-516 J9 on enclosed inquiry slip ▲

NEW *Taylor* LOW COST TEMPERATURE TRANSMITTER

The new Taylor SENSAIRE* Pneumatic Transmitter provides low cost temperature measurement within limits of minus 30°F. to plus 1200°F. with simplified adjustments, excellent repeatability and unusually fast response. Available in range spans of 50°F., 100°F., 200°F., and 400°F.

Sturdy, compact, force-balance, with mercury-filled thermal system, the SENSAIRE Transmitter is temperature compensated. Factory calibrated accuracy is well within 1% of rated range below 550°F.; 1½% above 550°F.

Write for SENSAIRE **Bulletin 98293.** Taylor Instrument Companies, Rochester, N.Y., or Toronto, Ont.

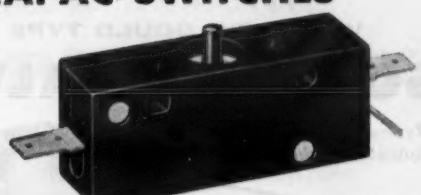
*Trade-Mark

Taylor Instruments MEAN ACCURACY FIRST

▲ For more details circle NED-517 J9 on enclosed inquiry slip ▲

SNAPAC SWITCHES

TYPE 750



For dependability at a fair price, specify Type 750 Snapac switches.

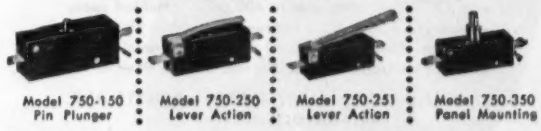
TYPE	Pre-Travel	Total Travel	Movement Differential	Operating Pressure	Catalog Number
Pin Plunger	1/16" to 1/64"	5/16" to 1/8"	.010 to .035	13 oz. max. 6 oz. min.	750-150
Lever Action	5/16" to 5/16"	3/16" to 3/16"	.030 to .070	9 oz. max. 4 oz. min.	750-250
	1/4" to 3/8"	1 1/16" to 1/4"	.078 to .125	6.5 oz. max. 4 oz. min.	750-251
Panel Mount	1/16" to 1/64"	1/4" to 1/8"	.010 to .035	13 oz. max. 6 oz. min.	750-350

FEATURES

- Instantaneous, positive make and break action
- High contact pressure
- Nonsensitive to vibration and shock
- Stable under momentary high overload

RATING: 15 amp 125v A.C., 10 amp 250v A.C., 1/2 hp 125/250v A.C.

FOUR MODELS COVER THE BROADEST RANGE OF SNAP ACTION SWITCH APPLICATIONS



Model 750-150 Pin Plunger · Model 750-250 Lever Action · Model 750-251 Lever Action · Model 750-350 Panel Mounting

CONTROLS COMPANY OF AMERICA
9577 Soreng Ave., Schiller Park, Illinois
Creative Controls for Industry

▲ For more details circle NED-518 J9 on enclosed inquiry slip ▲

STOP THIEVES WITH "BLACK LIGHT!"

Ideal burglar protection for spacious areas at a reasonable cost, the transistorized Kidde Photo-Electric Burglar Alarm System uses an invisible beam of "black light," is completely tamper-proof, requires no special wiring. It can be installed simply and easily by one man. For more information about this new, U.L.-approved protection, send the coupon or write to Kidde today!

Walter Kidde & Company, Inc., 924 Main St., Belleville 9, N. J.

Send me your Photo-Electric Burglar Alarm Data Sheet U-2.

NAME _____

ADDRESS _____

CITY _____ STATE _____

▲ For more details circle NED-519 J9 on enclosed inquiry slip ▲

the penetrating force of...

COLD STEAM CLEANS FASTER, BETTER, CHEAPER

Handle all kinds of cleaning jobs with the greatest of ease with HYDRO-AIR. This gun-type cleaner connects to standard air and hot or cold water supply. Compressed air "breaks" water into minute particles producing a dense penetrating force which blasts heavy dirt or quickly rinses metal sheets and small parts. Operates on 1 H.P. compressor and uses less than 3½ c.f. of air and 3½ gals. of water per minute. Easy to handle — weighs less than 2 lbs. Rubber sleeve protects user's hand when hot water is used.

$11.45

● NEW... Siphoning attachment for application of cleaning solvents — under pressure — on parts, machinery or any difficult surfaces for cleaning.

HYDRO-AIR PRESSURE WASHER

BLASTS STUBBORN DIRT! HARMLESS TO FINEST FINISH!

ORDER THROUGH YOUR SUPPLIER — or write direct. (Inquiries invited from industrial cleaning compounders interested in resale.)

D & M PRODUCTS, INC.
26 N. RAYMOND AVE. • PASADENA, CALIFORNIA

HYDRO-AIR is widely used throughout these industries:

Aviation	Construction	Transportation	Meat Packing
Automotive	Pharmaceutical	Railroads	Baking
Food Processing	Paper	Petroleum	Foundries
Brewing	Ship Building	Mining	Jewelry
Dairy Products	Textile	Metalworking	Leather

▲ For more details circle NED-520 J9 on enclosed inquiry slip ▲

CUT COSTS AND RAISE QUALITY WITH NEW GOULD TYPE M

SOLENOID VALVES

Typical Low Prices for 1" Size Subject to Usual Trade Discounts

$18.50 User Net for 100 to 400 Valves

$24.25 User Net for 1 to 5 Valves

Packless . . . 2-Way
General Service . . . ⅜" to 3"
Piston Pilot Operated

Immediate Delivery

Write Gould today for the lowest prices in the industry on solenoid valves with all these standard features: Temperatures to 250° F. . . . Pressures to 400 psi . . . Molded epoxy resin waterproof coils . . . Unbreakable piston rings . . . Guided pilot valve seats. Special assemblies available. Ask for bulletins on stainless steel, bronze, or cast steel valves.

J. D. GOULD CO. • 4707 MASSACHUSETTS AVE.
INDIANAPOLIS 18, IND.

GOULD SOLENOID VALVES VELVETROL

▲ For more details circle NED-521 J9 on enclosed inquiry slip ▲

Here's the low-cost answer to chain breakdowns caused by link-wear, stretch, corrosion and friction. OIL-RITE Chain Oilers feed oil by gravity through solenoid and sight feed valve to brush which rides the chain. Solenoid starts and stops with driving motor, making operation automatic, oiling only when chain moves. Drop feeding adjustable. 9 oz. — 1 gal. in capacity with brushes to suit your chains.

GIVE YOUR PLANT ALL THESE BENEFITS!
- Safe, sure chain lubrication
- Reduce chain wear
- Eliminate costly hand oiling
- Cleaner, less hazardous floors

Many styles of Electro and Manual Chain Oilers available. Write for Free Bulletin.

Oil-Rite CORPORATION
2364 WALDO BOULEVARD
MANITOWOC, WISCONSIN

Oil Cups • Dispensers • Oiling Systems • Valves • Oil Gages • Chain Oilers

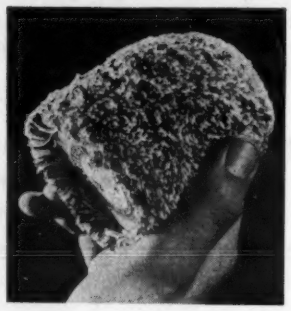
▲ For more details circle NED-522 J9 on enclosed inquiry slip ▲

DRAWING DESK features side storage unit

An attached side auxiliary storage unit for tools, instruments, catalogs, and tracings is featured by the Landmark walnut drawing desk. Basic components comprise a front table with adjustable drawing board, but no front storage area; a basic table which combines drawing and reference areas; and the rear reference desk, usually furnished the man who is last in a row. Auxiliary unit adds more than 3 sq ft of reference surface plus storage space. It has sliding doors with a key lock and a triple electrical outlet. Other desk features are a 30-in. drawing surface, two top sizes, concealed top adjusters, and leg leveling glides. Made by **Hamilton Mfg. Co.**, Drafting Equipment Div., Two Rivers, Wis.

▲ For more details circle NED-523 J9 on enclosed inquiry slip ▲

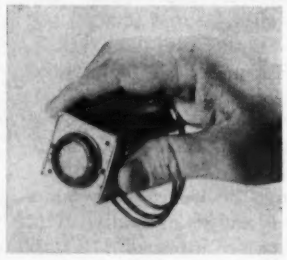
FINISHING BUFF in 4 to 8-in. diameter core sizes



Springy, dense wool fibers of Style 154 Ray-Buf goblet finishing buffs are mounted on solid 4 to 8-in. diameter hemispheric cores. They are recommended for finishing swaged or curved surfaces. Used in industrial polishing departments, automotive plants, and for furniture and appliances, buffs withstand frictional heat and will not gouge or streak. They are used with liquid or solid polishing compounds and are well constructed for grit facing. Made by **Schlegel Mfg. Co.**, Dept. G-B, 1555 Jefferson Rd., Rochester 23, N. Y.

▲ For more details circle NED-524 J9 on enclosed inquiry slip ▲

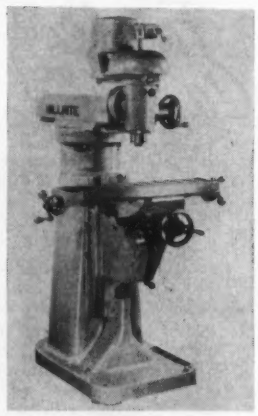
PHOTORELAY turns post lamps on and off



Model 6251 Photorelay automatically turns outdoor electric post lamps on ½ hr before sunset and off about ½ hr after dawn. Small enough to fit into post lamp housings, adapters, or hollow posts, unit has a simple, tubeless circuit. It comprises a hermetically sealed cadmium sulfide photocell and a Sigma Type 11 ac relay, and is unaffected by temperature changes. Unit operates on 110-120 v ac and will handle incandescent lamp loads up to 300 w. Mounting holes are provided on either base or front. Price is $5.65 net in quantities up to 1000. Made by **Fisher-Pierce Co.**, 60 Pearl St., South Braintree 85, Mass.

▲ For more details circle NED-525 J9 on enclosed inquiry slip ▲

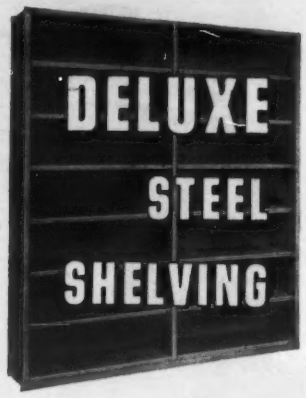
VERTICAL MILLING MACHINE is ¾-hp, 250 to 3450-rpm unit



With range and capacity of larger machines, the Millrite vertical toolroom milling machine is highly productive for precision milling and boring operations. It is equipped with a swivel head for angular work as well and features "feather feed" of the quill. The ram and turret machine has a 7 x 27-in. table with longitudinal feed of 16 in., crossfeed of 8 in., 15-in. vertical feed, and ram movement of 12 in. Quill travel is 4 in. V-belt drive transmits full power of the ¾-hp motor at all six spindle speeds from 250 to 3450 rpm, or alternately 185 to 2550 rpm. Made by **Cincinnati Mfg. Co.**, U. S. Burke Machine Tool Div., Brotherton Road at Pennsylvania R.R., Cincinnati 27, Ohio.

▲ For more details circle NED-526 J9 on enclosed inquiry slip ▲

fastest TO ERECT
fastest TO RE-ARRANGE
fastest TO PAY FOR ITSELF



fastest because . . . the exclusive Deluxe boltless shelf bracket replaces 90% of time-consuming nuts and bolts, providing quick installation and quick, easy shelf adjustment.

Proof of this was demonstrated at 1958 trade shows where two girls erected a complete section of Deluxe Shelving in less than 5 minutes.

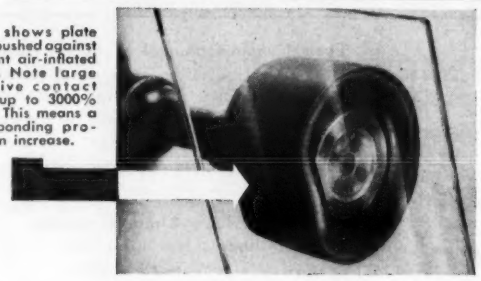
Call your local Deluxe dealer for quick, efficient shelving layout service. Or write for the new Deluxe Shelving Catalog #30.

DELUXE METAL PRODUCTS CO. • WARREN 1, PA.

DELUXE METAL PRODUCTS COMPANY
A DIVISION OF Royal METAL MANUFACTURING CO.

▲ For more details circle NED-527 J9 on enclosed inquiry slip ▲

Photo shows plate glass pushed against resilient air-inflated wheel. Note large abrasive contact area—up to 3000% more! This means a corresponding production increase.



. . . how to INCREASE BUFFING, POLISHING PRODUCTION 3000%

• You can boost your buffing and polishing output up to 3000% on flat work . . . and 600 to 700% on contours . . . by using this resilient air-inflated wheel. Many other advantages such as — *no chatter or bounce . . . eliminates under-cuts . . . produces a straight pattern similar to a hand finish.* For use on portable tools or bench-stands—wherever ordinary polishing wheels are used. Send NOW for free literature and name of distributor nearest you.

NU-MATIC GRINDERS, INC.

8224 Carnegie Ave. RAndolph 1-0980 Cleveland 3, Ohio
DETROIT—UNIVERSITY 3-3376 • NEW YORK—Barclay 7-0196
CHICAGO—Tuxedo 9-4300
CANADIAN DISTRIBUTOR—Wm. Orlick, Ltd., Hamilton, Ontario

▲ For more details circle NED-528 J9 on enclosed inquiry slip ▲

CUT GOGGLE CLEANING COSTS with K-LENS-M
REG. U.S. & CAN. PAT. OFF.

BETTER VISION PRODUCTS

Personal and Protective Eye Wear Stay Clean Longer with K-Lens-M at Lower Cost per Cleaning.

The Modern Liquid Method Cleans and Anti-Fogs Glass or Plastic

For FREE Sample: send company letterhead

The WILKINS Co., Inc.
Cortland 32, N. Y.

Wise to Choose — Safe to Use

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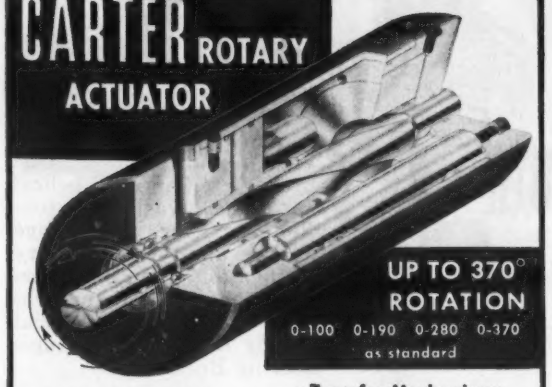
▲ For more details circle NED-529 J9 on enclosed inquiry slip ▲

SOLVE ROTARY MOTION PROBLEMS

CARTER ROTARY ACTUATOR



UP TO 370° ROTATION
0-100 0-190 0-280 0-370 as standard

- SAFE, LEAKPROOF PERFORMANCE
- BUILT IN CUSHIONS
- OIL, AIR, WATER OR GAS
- Transfer Mechanisms
- Indexing
- Positioning
- Valve Operation
- Cam Actions

SEND FOR NEW BULLETIN RA-500 Complete Details and specifications. All essential design data. Send today!

CARTER CONTROLS, INCORPORATED
2876 Bernice Road, Lansing, Ill.
Phones: Lansing—GRanite 4-3305 • Chicago—BAyport 1-7186

For more details circle NED-530 J9 on enclosed inquiry slip

Eastern PORTABLE MIXERS

especially designed for small batch processes

. . . offer precise mixing results with long-term cost savings

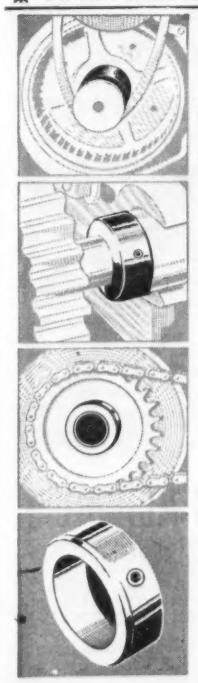
Eastern Portable Mixers give dependable, low-cost service in small batch processes. Where fixed mounted installations are not required, Eastern's Portables offer greater versatility, ease of handling, and long-term savings.

Speeds of 420, 1125, and 1725 R.P.M. rated from 1/20 to 3 H.P. are standard. Motors in all standard types can be supplied in open drip-proof, totally-enclosed, or explosion-proof construction.

Write for new Portable Mixer Bulletin 530-N.

EASTERN INDUSTRIES, INC.
MIXER DIVISION • NORWALK, CONN.

For more details circle NED-531 J9 on enclosed inquiry slip



HALLOWELL steel collars

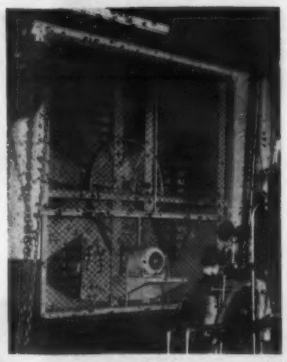
—practical answer to dozens of fastening problems

If your product incorporates shafts or spindles, HALLOWELL steel collars can help you simplify design and purchasing. For example, you can utilize these versatile fasteners as thrust collars, locking collars, spacers, cam operators, valve stem adjusting collars, indexing devices, hubs for plate sprockets, etc. And you can get immediate delivery (sizes 1/16 through 3 inch bore) from local dealer stocks. Collars feature famous UNBRAKO knurled cup point set screws for positive locking action. See your SPS distributor or write direct for new folder 2554 offering latest application ideas.

INDUSTRIAL FASTENER Division SPS
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-532 J9 on enclosed inquiry slip

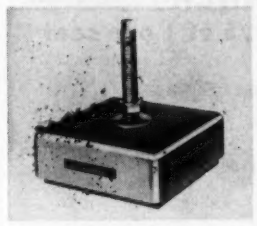
LARGE VENTILATING FANS rated 45,000 to 175,000 cfm



Made in 5, 6, and 8-ft diameters, Breezemaker Type E cooling and ventilating fans are designed for quiet, continuous industrial operation. Easily installed, they can be used for exhaust, fresh air, or circulating purposes. UL-listed motors in open, totally enclosed, or explosionproof design are available for single or three-phase operation in ½ to 20-hp ratings. Sparkproof belts and blades are optional for explosionproof service. They deliver 45,000 to 175,000 cfm. Made by Monarch Electric Co., 487 W. Main St., New Britain, Conn.

For more details circle NED-533 J9 on enclosed inquiry slip

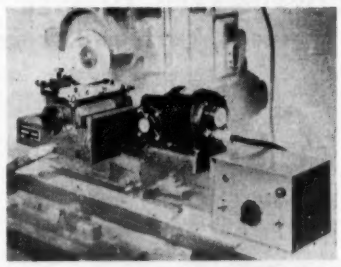
VIBRATION ABSORBING MOUNTS support loads to 8000 lb each



When Model L Kinetic vibration isolating mounts are used to install industrial machines of all types, it is not necessary to lag or fasten machines to floor nor to install heavy foundations. Machines can thus be moved as required with minimum of work. Mounts provide high internal damping for control of vibration and shock through use of high-density molded Owens-Corning Fiberglas materials encased and bonded in neoprene. Built-in leveling feature is added advantage. Three sizes handle loads ranging to 8000 lb per mount. Made by Consolidated Kinetics Corp., 1065 Dublin Rd., Columbus 8, Ohio.

For more details circle NED-534 J9 on enclosed inquiry slip

PORTABLE GRINDER ATTACHMENT converts surface to centerless unit



Any surface grinder is converted into a precision OD, ID, and centerless grinder with this portable attachment. For centerless grinding, the work rests on a motor-driven regulating roller which has precision bearings and infinitely variable speed control. For plunge grinding, a hold-down bracket is used to assure concentricity with the diameter on which the part is held. A coolant pump is included. Made by Unison Corp., 1805 S. Stephenson Highway, Royal Oak, Mich.

For more details circle NED-535 J9 on enclosed inquiry slip

Cut this Angle 10 Times in 28 seconds

including positioning—only 1/5¢ Blade Cost Per Cut

with PROMACUT

Model Uni - 8A 10 H.P.

MULTI-PURPOSE CUT-OFF SAW

Does any job you're now doing by hacksaw, bandsaw, abrasive or friction cut-off . . . and does it faster, cheaper and more simply. Straight and angle cuts, notches, outcuts and incisions—by free-hand or table cutting.

- No coolants needed
- No clamping or hold-down
- Cuts smooth—practically burr-free
- Cuts all shapes of carbon, stainless and alloy steel

Other Typical Cutting Examples

Stock (Mild Steel)	Time, Secs. Per Thru-Cut	Min. Cuts Before Sharpening	Blade Cost Per Cut
¾" dia. Round	0.6	2500	$.0027
5/16" Flat x 7" length	0.9	3400	.0020
2" Square Tube, ¼" Wall	1.8	2000	.0034
4" dia. Tube, ⅛" Wall	1.2	3600	.0019
3" x 3½" x ⅛" Angle	3.6	1200	.0057

Write for details . . . ask for mobile demonstration at your plant

PMI nc. PRODUCTION MACHINERY, INC.
BALTIMORE • CHICAGO
LOS ANGELES • HOUSTON
P.O. Box 322, Dept. B, Oakton Station, Des Plaines, Illinois

DEALERS: Some territories still open — write on letterhead

For more details circle NED-536 J9 on enclosed inquiry slip

For more reliable soldering and less down time by skilled or unskilled workers

NEW Weller® SOLDERING IRONS

with built-in MAGNASTAT temperature control

. . . automatically maintains correct soldering temperature

Newest soldering development! Controlled temperature iron never overheats. Minimizes tip redressing. Reaches full heat quickly. Operator benefits include . . . only half the weight of uncontrolled irons; handle stays cool. Sensing device is in the Magnastat Wellertip. These advantages mean less down time and more reliable soldering for all production line employees.

3 models cover all electrical soldering requirements. All models have 3-wire plug. Send for folder.

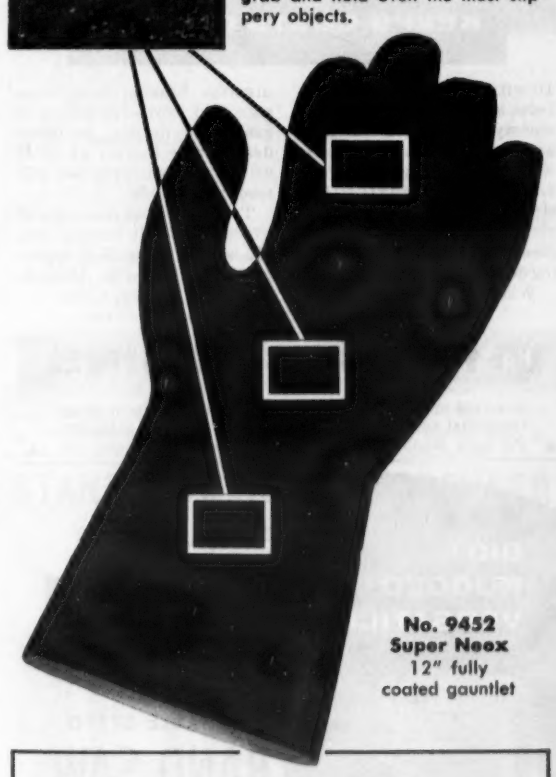
WELLER ELECTRIC CORP. 601 Stone's Crossing Rd. Easton, Pa.

For more details circle NED-537 J9 on enclosed inquiry slip

NEW EDMONT SUPER NEOX

The neoprene glove with non-slip grip and maximum solvent-resistance

THOUSANDS OF TINY "CLEATS," cured into coating for sure grip, grab and hold even the most slippery objects.



No. 9452 Super Neox 12" fully coated gauntlet

► Here is the neoprene coated glove with positive non-slip grip, wet or dry. Super Neox thus overcomes the one disadvantage of neoprene, long noted for best all-around resistance to oils, solvents, cuts and abrasion. In addition to sure grip, Super Neox offers a tougher compound of neoprene for maximum solvent and cut resistance. Already a proven cost-cutter, outperforming leather and ordinary coated or rubber gloves in hundreds of applications. Available in 5 styles to fit your job requirements.

FREE TEST OFFER TO LISTED FIRMS: Describe your operation. From more than 50 types we will recommend the correct glove and supply samples for on-the-job testing. Edmont Manufacturing Co., 1240 Walnut St., Coshocton, Ohio. In Canada write MSA, Toronto.

Edmont JOB-FITTED GLOVES

For more details circle NED-538 J9 on enclosed inquiry slip

HAGEN synchronous motors . . .

MODEL 50

FOR INDUSTRIAL AND LABORATORY APPLICATIONS

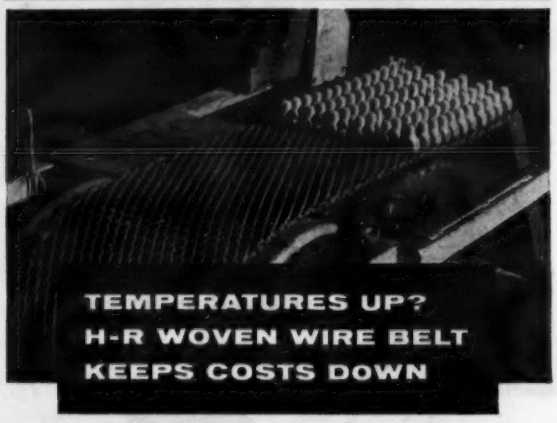
★ DIE CAST HOUSING
★ HIGH TORQUE
★ BRONZE BEARINGS
★ FOR 24, 115, 230, 440 AND 550 V. OPERATION
★ OUTPUT SPEED 1800 TO 1/6th RPM

Available in five models, these motors are designed primarily for industrial applications requiring motor sizes between "clock" and fractional horsepower types. Motor sizes approx. 3¼" x 1½" x 2½".

Write for complete descriptive Bulletin No. 1055. Address Dept. NED-959.

HAGEN MANUFACTURING COMPANY
Baraboo, Wisconsin

▲ For more details circle NED-539 J9 on enclosed inquiry slip ▲



Hewitt-Robins woven wire belts are available in a wide variety of alloys, in standard and special constructions, with mesh openings from 1/64" to 3". Their flexibility, strength, and draining and circulating characteristics meet the demands of conveying materials larger than 1/64". Whether your processing involves brazing heat, sub-zero cold, corrosive action of gases and liquids, or other destructive forces, an H-R woven wire conveyor belt will meet your needs.

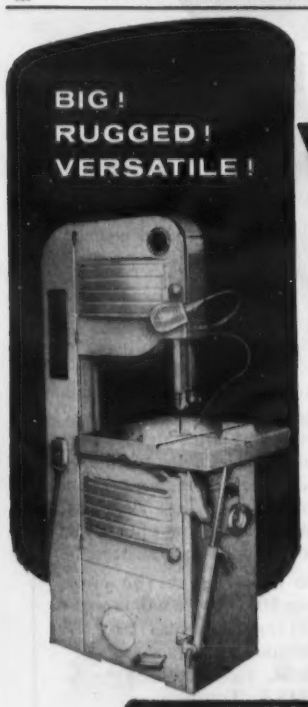
To obtain your free copy of woven wire belt catalog No. 31, consult your H-R representative, or write Hewitt-Robins, Stamford, Conn.

Ask for bulletin 9-14

HEWITT-ROBINS

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

▲ For more details circle NED-540 J9 on enclosed inquiry slip ▲



New WT (WALKER-TURNER)

20" VARIABLE SPEED BAND SAW

You can do heavy-duty cutting of metals, wood, or plastics by dialing speeds from 50 to 4500 fpm. Scientifically designed blade guides assure better accuracy, straighter cuts, longer blade life. Ask your W-T Distributor for a demonstration. (He's listed under "TOOLS" in the Yellow Pages.)

FREE CATALOG—write to Rockwell Manufacturing Company, Walker-Turner Division, WJ45 N. Lexington Ave., Pittsburgh 8, Pa.

WALKER-TURNER
LIGHT-HEAVYWEIGHT MACHINE TOOLS
another fine product by
ROCKWELL

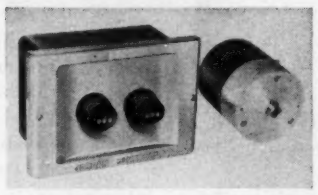
▲ For more details circle NED-541 J9 on enclosed inquiry slip ▲

PNEUMATIC DRUM SANDERS
finish irregular shapes and contours

Slightly inflated rubber drums of the No. 18 pneumatic drum sander provide a cushion that always conforms to contoured wood and metal surfaces. In woodworking, uniform results are obtained without regard to grain. Abrasive cloth polishing sleeves are available for metal-working uses. Drums with 2 to 16-in. diameters are 9 in. wide. Special size belts are offered. Usually a small and a large diameter drum on one machine permits sanding an entire workpiece. The sander has a 1200 or 1800 rpm motor. Made by **Ekstrom, Carlson & Co.**, 1400 Railroad Ave., Rockford, Ill.

▲ For more details circle NED-542 J9 on enclosed inquiry slip ▲

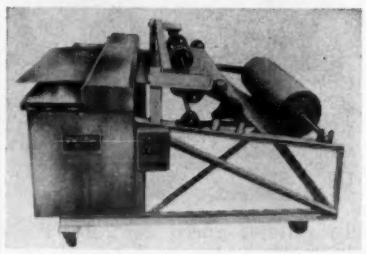
ELECTRONIC LIMIT SWITCH
limits accurate to 1/5 of 1 per cent



Limits are quickly set to within 1/5 per cent of full scale on this electronic limit switch designed for applications where one or more trip points must be reset frequently. High-accuracy systems can be set to 1 part in 250,000. Switch is used to set machine tool limits, trip points on batch weighing scales, to adjust pressure limiting device, and for other load limiting functions. System comprises a transistorized setter (left in photo) and the sensor. Shaft-mounted sensor, shown at right, includes a built-in potentiometer. Made by **Jordan Co.**, 3235 W. Hampton Ave., Milwaukee 9, Wis.

▲ For more details circle NED-543 J9 on enclosed inquiry slip ▲

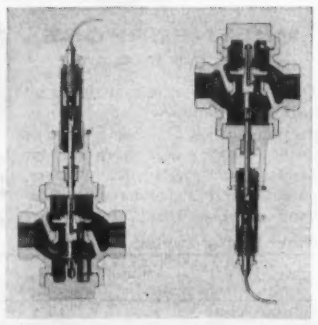
CORRUGATED SHEETER
feeds, cuts, and scores wrapping



Wrapping and packaging operations are speeded with this Wrap-O-Matic automatic variable-length sheeter for single-faced corrugated material. It will feed, cut, and score any size sheet from 6 to 96 in. long at the push of a button. It can be set to deliver any of four predetermined lengths, and sizes are instantly adjustable. Machine handles rolls up to 48 in. wide. The optional scoring device can be set to facilitate making any type tube, sleeve, or insert. Machine can also be synchronized for making built-up pads. Offered by **Wilcar Corp.**, 110 N. Franklin St., Chicago 6, Ill.

▲ For more details circle NED-544 J9 on enclosed inquiry slip ▲

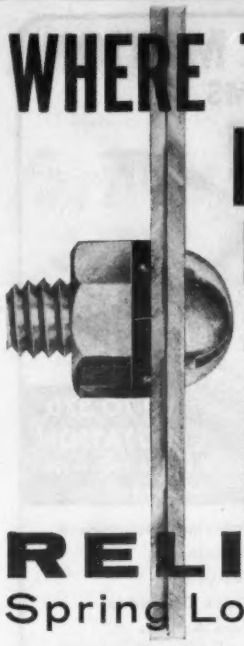
TEMPERATURE REGULATOR
for heating and cooling services



Self-contained, self-operated temperature regulators incorporate a balancing bellows which permits smooth functioning at inlet pressures and pressure drops up to 100 psi. Class M direct-acting unit for heating service (left) and Class MR reverse-acting unit for cooling service (right) are made in ¾ and 1-in. body sizes in both cast iron and bronze with screwed ends. Adjustment for any set temperature is by turning a knurled adjusting sleeve. Variety of temperature-sensing thermo-elements with various ranges, spans, and bulb materials are available. Reversing the valve action from heating to cooling or vice versa is by interchanging the bottom cap and bonnet assembly. Made by **Leslie Co.**, 129 Delafield Ave., Lyndhurst, N. J.

▲ For more details circle NED-545 J9 on enclosed inquiry slip ▲

WHERE TIGHTNESS IS VITAL



No substitute has ever been found for a quality, properly-engineered helical spring lock washer. Eaton-Reliance offers a full range of sizes and types for every application—and engineering service for every problem. Write for our special Spring Lock Washer Engineering Bulletin.

RELIANCE Spring Lock Washers

EATON RELIANCE DIVISION MANUFACTURING COMPANY
509 CHARLES AVENUE • MASSILLON, OHIO

SALES OFFICES: NEW YORK • CLEVELAND • DETROIT
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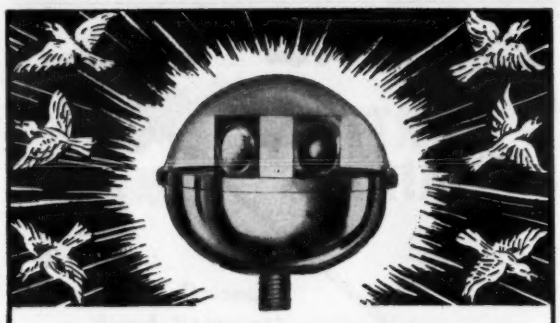

It's for the BIRDS!

STOP COSTLY WAREHOUSE DAMAGE . . .
Flash the MARK VIII Bird Eliminator

Now, bird damage so expensive to packaged goods, sheet steel, machinery, grain and other merchandise stocked inside warehouses can be eliminated! This light covers 360° like an airplane beacon with dual colored beams at the rate of 200 a minute. The roving rays continuously disturb the birds, interrupting their feeding and nesting to the extent that they do not remain. Lifetime vitreous enameled housing can't corrode. Operates on 115-120 V, is easily installed and has a 2000-hour bulb.

Get the Facts—Write TODAY!

TRIPPE MANUFACTURING CO.
133 N. Jefferson, Dept. F-3, Chicago 6, Ill.

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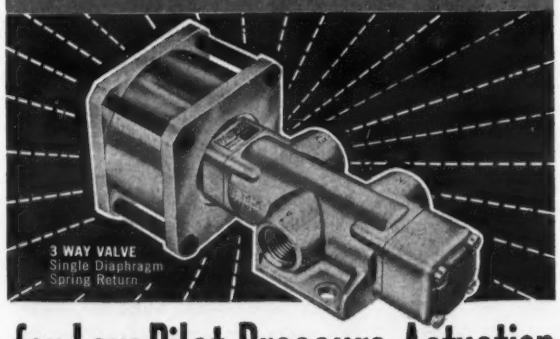
VERSA Diaphragm Actuated Valves



for Low Pilot Pressure Actuation

■ Versa Diaphragm Valves can be actuated by pilot (or signal) pressures as low as 5 PSI on double diaphragm types and as low as 10 PSI on standard spring return models.

Versa Diaphragm Valves are available with side port bodies or for manifold mounting, and in sizes from 1/8" thru 1" NPT in 2-, 3-, 4-, and 5-way types, and for pressures from partial vacuum to 500 PSIG.

All Versa Valves are triple pressure and functionally tested under water for guaranteed leakproofness.

VERSA

■ Write Today for your free copy of bulletin 259

VERSA PRODUCTS COMPANY INC.
249-A SCHOLES STREET
BROOKLYN 6, N. Y.

▲ For more details circle NED-548 J9 on enclosed inquiry slip ▲

equip for the **BOOMING 60's**

install Viking Pumps now!

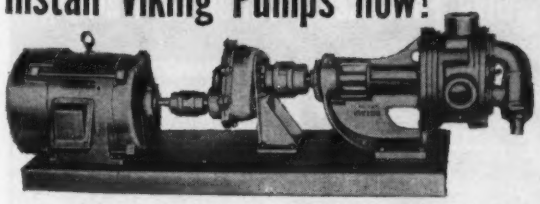


FIG. 288, HEAVY-DUTY PUMP WITH HELICAL GEAR DRIVE

Are you looking ahead to peak production? Will your pumps be operating full time, returning your investment through the 60's . . . or will they need service and replacement?

You can depend upon VIKING POSITIVE DISPLACEMENT PUMPS to return your investment . . . to stay on the job . . . to give you FAST priming, strip your tanks if desired . . . to move thin or viscous liquids without excessive turbulence.

Read these actual statements from Viking Pump users — solid proof of top performance:

"This rugged old-timer of 25 years' service and NO repairs convinced us to buy a whole plant full of Vikings."

"I'm buying a heavy-duty Viking to add to my line. From the service I have had on the one for the past several years, I'll not hesitate to buy this improved model."

Look ahead to the 60's! And look to Viking Pumps for profitable operation. For information on the newest Viking Pumps send today for folder SP-488G.

VIKING PUMP COMPANY
Cedar Falls, Iowa, U. S. A. In Canada, it's "ROTO-KING" pumps
See Our Catalog in Sweet's Plant Engineer's File

▲ For more details circle NED-549 J9 on enclosed inquiry slip ▲

Put new profits into your work with modern foot shears that cut through sheet metal slick as a whistle! Combining rigidity, compactness and light weight, Niagara Foot Squaring Shears handle your cutting jobs with unrivaled ease, accuracy and speed.

Using the convenient, quick-setting, calibrated back and side gages, or the front gage, it's a cinch to line up work on the sturdy, all-welded steel bed. A rugged, one piece steel holddown grips the metal firmly, yet leaves the cutting line clearly visible.

You'll like the smooth action of the treadle. It's well-balanced, powerful, efficient. The rigid steel crosshead is accurately guided by adjustable, non-metallic ways. Sturdy, stable housings maintain alignment of working parts, accuracy of knife travel, and eliminate need for bolting to floor. Long-lasting Niagara knives maintain their keen cutting edge, assure maximum service.

Find out how Niagara Foot Squaring Shears can turn out better work at greater profits to you. Niagara offers you a complete line — Series F (22" - 120", 18 & 16 ga.) and Series G with 18" Gap (36" - 72", 16 ga.)— to meet light sheet metal requirements with ease . . . as well as the largest range of power shears in the industry. Write for new, illustrated Bulletin 80-FC today.

NIAGARA MACHINE & TOOL WORKS • BUFFALO 11, N.Y.
DISTRICT OFFICES:
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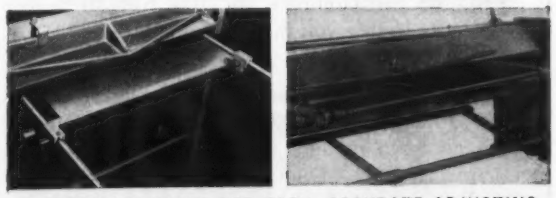
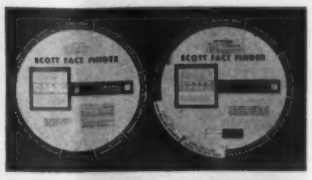
Distributors in principal U. S. cities and major foreign countries



CONVENIENT GAGES FOR EASY, ACCURATE ADJUSTING
(Left) Quick-setting and locking, calibrated back gage. (Right) Ball bearing, self-measuring parallel back gage on large models. Adjustable, calibrated side gages (not shown).

▲ For more details circle NED-550 J9 on enclosed inquiry slip ▲

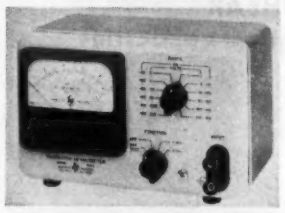
WASHROOM MAINTENANCE GUIDE
calculator indicates service times



This Scott Fact Finder is a dial type calculator that enables plant management and maintenance supervisors to determine if washroom cleaning and servicing are being accomplished economically. Based on a time and motion study, guide will indicate the average time required to perform various janitorial duties, recommended frequencies for cleaning operations, and servicing various facilities. Second side of calculator indicates average time needed to fill towel cabinets and toilet tissue dispensers. Offered free by **Scott Paper Co.**, Washroom Advisory Service, Front & Market Streets, Chester, Pa.

▲ For more details circle NED-551 J9 on enclosed inquiry slip ▲

TRANSISTORIZED VOLTMETER
measures from 1 mv to 300 v ac



Weighing less than 5 lb, this Model 403A transistorized voltmeter is equipped with a 400-hr battery and is usable anywhere. It measures voltages from 1 mv to 300 v ac full scale and is accurate over range of 1 cycle to 1 megacycle. It has twelve voltage ranges and also reads from −72 to 52 decibels. Battery voltage is easily checked, noise is less than 50 mv, and instrument is isolated from power-line or ground interference. Price is $250. Made by **Hewlett-Packard Co.**, 275 Page Mill Rd., Palo Alto, Calif.

▲ For more details circle NED-552 J9 on enclosed inquiry slip ▲

FHP MAGNETIC BRAKES
for small motors and gear trains

Available in three sizes with 1 and 2-in. OD and torque ratings from 10 to 15 oz-in., miniature brakes are designed for mounting directly on small motors and gear trains. Power consumption of these electromagnetic units is 2 to 4 w. They can be supplied to brake either when electrically energized or de-energized, and coils are available for 6, 12, 28, 48, and 100-v dc service. Brakes meet applicable Military specifications covering shock, vibration, humidity, and temperature. Made by **Dial Products Co.**, 19 Cottage St., Bayonne, N. J.

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JUST WON'T SLIP. . .

Granet's new wet-grip **PYTHON** Neoprene just won't slip . . . even under the most trying conditions . . . yet costs no more than smooth neoprene coated or leather work gloves.

The wet-grip feature of **PYTHON** neoprene coated work gloves is a big plus for the man working with oil . . . grease . . . chemicals or other slippery materials.*

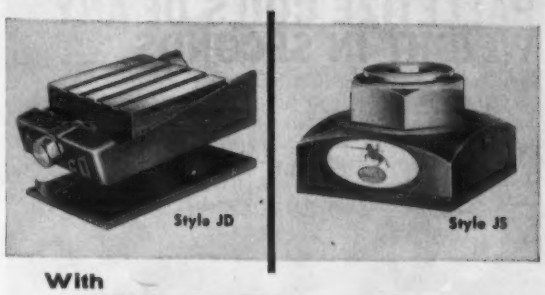
Flannel lining with wing thumb for added comfort and wear. Variety of styles . . . knit wrist to 18" gauntlet.

**Prove it to yourself . . . write for a free pair on your letterhead . . . and put them to the test!*

THE GRANET CORPORATION
25 LORING DRIVE, FRAMINGHAM, MASS.

▲ For more details circle NED-554 J9 on enclosed inquiry slip ▲

DEPENDABLE MACHINE SUPPORT!



With

EMPCO

LEVELING JACKS

For better machine performance set your machines level and keep them level! That's the key to increased production with less maintenance! EMPCO Leveling Jacks provide a solid, adjustable support for machine tools, large surface plates, tool room, and production equipment of all types. Easily installed and located, EMPCO Jacks keep your equipment level and stable—keep maintenance at a minimum.

VI-SORB Mounting Pads, optional with EMPCO Jacks, control vibration from within the machine itself and reduce transmitted vibrations. Available in six styles and 25 models there's a EMPCO Jack and VI-SORB Mounting Pad for your every machine leveling requirement!

WRITE TODAY FOR ILLUSTRATED BULLETIN AND PRICES!

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

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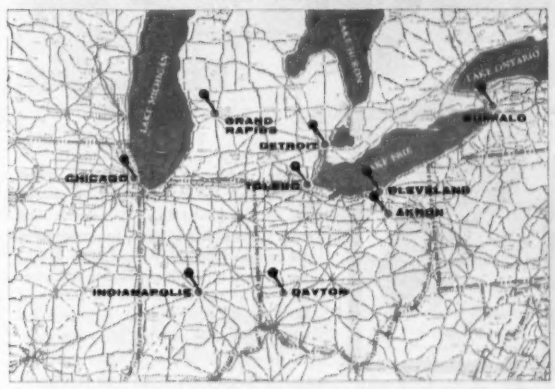
PENINSULAR'S Team of 9 Steel Service Centers working together to give you STEEL plus SERVICE

America's Largest Independent Tool Steel Distributor



TOOL STEELS • ALLOYS • COLD DRAWN • HOLLOBAR
FLAT GROUND STOCK • DRILL ROD • PLATE

Over 40 Years of Service to Industry

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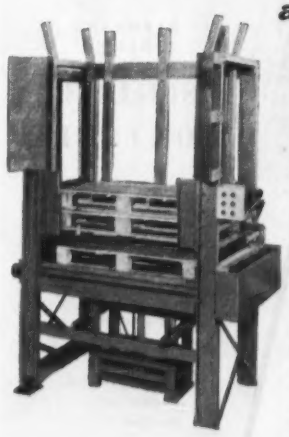
STANDARD PALLET DISPENSER
releases pallets one at a time — *automatically*



Pallet dispensing made easy—with this fast, automatic unit. Standard-designed to dispense pallets from a stack 12-14 pallets high . . . in any of three directions. Regular fork lift trucks can easily feed or load pallets into the dispenser.

For complete information, see the Standard engineer listed in your phone book, or write Dept. K-9, STANDARD CONVEYOR COMPANY, General Offices: North St. Paul 9, Minnesota.

Standard
GRAVITY & POWER CONVEYORS
OVER 50 years

Sales & Service in Principal Cities—In Canada: International Equipment Co., Ltd., Montreal, Toronto, Hamilton, Edmonton and Vancouver.

▲ For more details circle NED-557 J9 on enclosed inquiry slip ▲

NEW TURNOVER CRADLES PALLETIZE COILS OF ANY WEIGHT IN SECONDS

You can now palletize coil loads weighing from 3000 to 40,000 pounds in 14 to 40 seconds with the portable, automatic La Deau TURNOVER CRADLE. This revolutionary Cradle lets one man handle as much material in an hour as two men usually handle in three hours! Palletizing saves 400% in storage efficiency and eliminates damaged materials, elongated coils and dangerous band breakage.

Write today for descriptive literature

turnover cradle

A Product of La Deau Mfg. Co.
2702 San Fernando Rd., Los Angeles 65, Calif. • CApitol 2-8108

▲ For more details circle NED-558 J9 on enclosed inquiry slip ▲

Measure Tension and Compression Loads

with precision, direct reading Hunter Mechanical Force Gages*—Series L type in 13 models for measuring load ranges from 0-500 grams to 0-30 pounds and Series D type in 6 models for measuring load ranges from 0-50 pounds to 0-500 pounds. Both types are accurate to better than 1% of full scale, can be provided with a "hold-at-maximum" indicator for registering maximum load, come complete with six attachments and wood carrying case. Thousands are now in use in laboratories, inspection departments, on production lines, and in the field. Send for Bulletin 750c containing full details including prices.

*The "Force Gage" of many test standards.

HUNTER SPRING COMPANY
A Division of American Machine and Metals, Inc.
14 Spring Avenue, Lansdale, Pennsylvania

▲ For more details circle NED-559 J9 on enclosed inquiry slip ▲

FRAHM®

RESONANT REED ROC

OSCILLATOR CONTROLS

APPLICATIONS
- Electrical and Acoustical Measurements
- Electrical Communication Systems (Selective Calling)
- Remote Operation and Supervisory Control of Machinery and Apparatus
- Electrical Computers and Telemetering Systems
- Electro-Mechanical Bandpass Filters

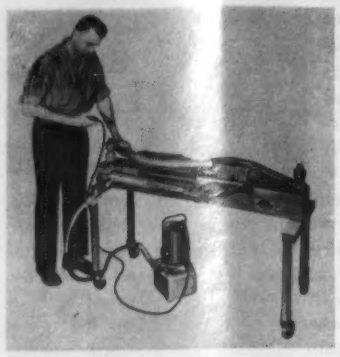
FEATURES
- High accuracy
- Stability of frequency control
- Self starting
- Infinite service life
- Integral, sealed, magnetically shielded
- Standard octal tube pin connectors
- Small, light weight

With any one nominal control frequency between 20 and 1100 cps
Write for BULLETIN 34-D

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle NED-560 J9 on enclosed inquiry slip ▲

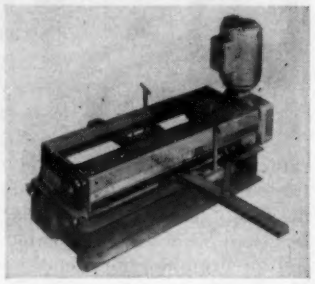
PIPE & CONDUIT BENDER
handles ½ to 2-in. pipe



With one setting and one ram stroke, this multipurpose hydraulic pipe and conduit bender will make accurate offset and full 90-degree bends close to the end of ½ to 2-in. pipe and conduit. Bends between 90 and 180 degrees are also easily made. Unit develops 15-tons of ram pressure and can be hand or power pump operated. It is caster mounted for mobility, but can be operated at floor level. Made by **Greenlee Tool Co.**, 2136 12th St., Rockford, Ill.

▲ For more details circle NED-561 J9 on enclosed inquiry slip ▲

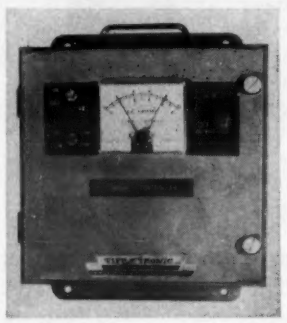
POWER SLITTING SHEAR
10, 14, and 20-gage capacities



Easily adjusted back gage, clamped to both sides of the heavy machine frame to withstand cutting stresses, is built into the Beverly power slitting shear. Two reversible and interchangeable, high carbon, high chrome cutters are driven through steel shafts by a heavy duty motorized gear set and enclosed worm gear drive. Easy to read etched scales on each side permit quick setting of any cutting width from 1½ to 30 in. Sheet is kept in alignment by a retaining roller. Three available sizes cut 10, 14, and 20-gage mild steel. Made by **Beverly Shear Mfg. Co.**, 3004 W. 111th St., Chicago, Ill.

▲ For more details circle NED-562 J9 on enclosed inquiry slip ▲

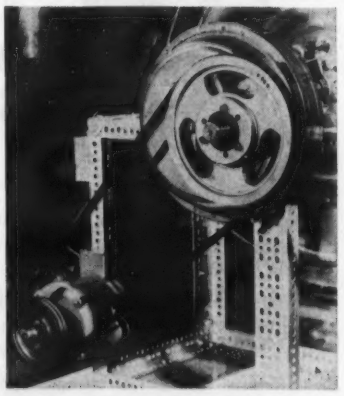
TORQUE CONTROL
measures current drawn by drive



Critical production or testing operations involving torque are simplified with use of the TippTronic torque control. It makes accurate torque force measurements, automatically shutting off power equipment at optimum point. Control utilizes current drawn by motor drive as measurement factor. Shutoff is at a point slightly above normal work load. Control will help prevent damage to tool bits, assures proper degree of tightness in nut and bolt assembly, and will function as an alarm in production processes. Made by **Tipp-Tronic, Inc.**, 510 E. Washington St., Chagrin Falls, Ohio.

▲ For more details circle NED-563 J9 on enclosed inquiry slip ▲

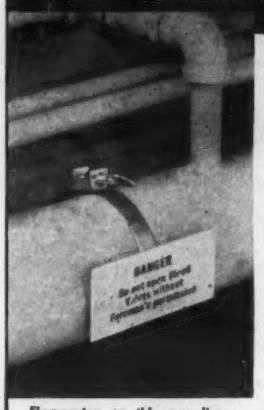
V-BELT DRIVES
8-belt unit transmits up to 1500 hp



V-belts used in American 3-5-8 drives have cross-sectional areas reduced nearly 50 per cent with no loss in life expectancy. These belts, plus narrower sheaves, allow more power to be transmitted in the same area, or the same power with smaller center distances. Three belt cross section sizes replace five sizes needed with previous drives. Models with three, five, and eight V-belts handle drives from 1 to 50, 200, and 1500 hp, respectively. Top widths for belts on these units are ⅜, ⅝, and 1 in. Rim speeds up to 6000 fpm are possible. Made by **American Pulley Co.**, 4200 Wissahickon Ave., Philadelphia 29, Pa.

▲ For more details circle NED-564 J9 on enclosed inquiry slip ▲

MARMAN Flagmaster Clamps
Give Fast Identification or Warning



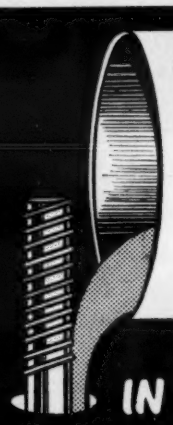
Eliminate dangers, delays and mistakes by identifying lines and equipment with Marman Flagmaster Clamps. Made of corrosion-resistant stainless steel, they attach quickly to stands, poles or pipes to display instructions, warnings or identifications on 2" x 4" flag. Adjustable strap in choice of 4 lengths to fit diameters from 2⅝" to 16⅛".

Flagmaster on this gas line gives "on-the-spot" instructions

7125 Flagmaster Clamp
Flagmaster is an Aeroquip Trademark

Aeroquip
MARMAN DIVISION
INDUSTRIAL SALES DEPARTMENT
11214 EXPOSITION BLVD., LOS ANGELES, CALIFORNIA
IN CANADA: AEROQUIP (CANADA) LTD., TORONTO 19, ONTARIO
Marman Products are Covered by U.S. and Foreign Patents and Other Patents Pending

▲ For more details circle NED-565 J9 on enclosed inquiry slip ▲



POR-ROK
(POUR ROCK) ®

ANCHORS BOLTS PERMANENTLY IN CONCRETE

IN 30 MINUTES!

POR-ROK
1. Fastens anything into concrete—PERMANENTLY—in minutes
2. Lowest cost
3. Mixed with water and poured into place
4. Applied cold
5. Self-leveling, self-bonding, oil resistant, never shrinks
6. Compression strength 4,500 psi in 1 hour

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

▲ For more details circle NED-566 J9 on enclosed inquiry slip ▲

ELK-O-MATIC

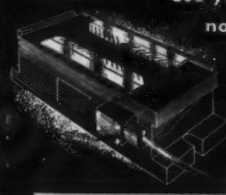
ELK-O-MATIC VIBRATORY PARTS FEEDERS will increase the speed and accuracy of any production operation requiring a continuous single line feed of small parts. ELK-O-MATIC PARTS FEEDERS will eliminate the labor costs in hand feeding and place you in a more COMPETITIVE PRODUCT MARKET.

Write for brochure illustrating complete line of ELK-O-MATIC VIBRATORY PARTS FEEDERS or send your product part to us for complete oriented feeding. Quotations given by request.

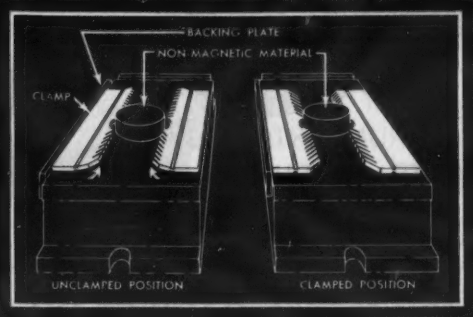
ELK ENGINEERING WORKS, INC.
St. Marys, Penna.

▲ For more details circle NED-567 J9 on enclosed inquiry slip ▲

Use your magnetic chuck to hold non-magnetic materials, too!



Magna-Vise* eliminates cumbersome fixtures



Work piece is placed on chuck between jaws of Magna-Vise. When chuck is energized, jaws draw down firmly against chuck surface and hold work-piece solidly in place. Magna-Vise quickly repays its low cost. Four sizes, precision made. Priced from $28.00 to $55.00. Write Dept. NM-99.

*Pat. No. 2477297

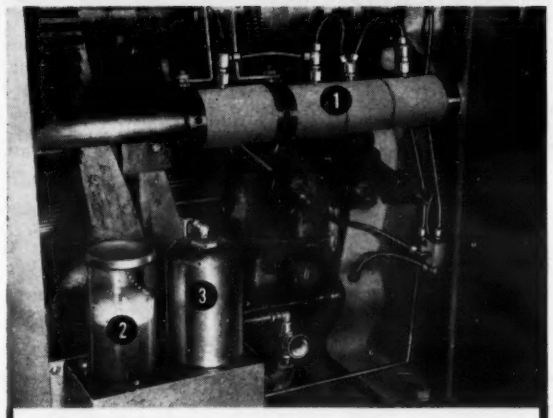
MAGNA-LOCK, INCORPORATED
BIG RAPIDS, MICHIGAN, U.S.A.

▲ For more details circle NED-568 J9 on enclosed inquiry slip ▲

costs less...

Alemite Accumite System

MAKES CENTRALIZED LUBRICATION ECONOMICAL FOR ANY MACHINE!



ACCUMITE LUBRICATES 24 POINTS OF SPRING WINDING MACHINE. 1. Valves mounted directly on bearings. 2. Transparent lubricant reservoir. 3. Manually controlled air pump, actuated by "push-pull" valve.

The small size and simple installation of Alemite's Accumite System makes centralized lubrication economical for original design on many machines where it has previously been considered too costly. Complete with fully automatic pump, metering valves and controls, Accumite offers all the advantages of higher-priced systems.

Accurately meters these shots of oil or grease:

.003 cu. in. .006 cu. in. .009 cu. in.

Available with adjustable fittings for applications requiring measured metering from .003 to zero.

• Meters exact amount of refinery-clean lubricants to all bearings whenever system is operated. • Eliminates shutdown time for lubrication. • Seals bearings against dirt, grit and water. • Prevents bearing troubles due to neglect or use of wrong lubricants. • Services all bearings in one operation. • Avoids work spoilage and bearing repairs due to overlubrication.

Send for Alemite Accumite catalog!

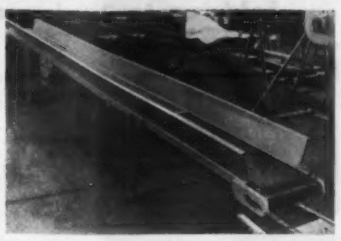
Symbol of SW Excellence

ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. HH-99, 1850 Diversey Parkway, Chicago 14, Illinois

▲ For more details circle NED-569 J9 on enclosed inquiry slip ▲

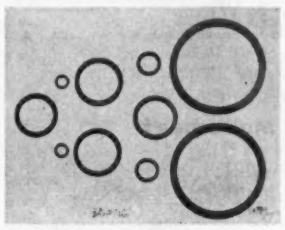
SCRAP CONVEYOR
in 3 to 24-in. belt widths



Heavy gage steel troughing sides with formed edges are featured by this scrap or refuse conveyor available in 3, 6, 8, 12, 18, and 24-in. belt widths. Operating with a speed reducer, belt is driven at 90 fpm by 1/4 to 2-hp motor. Frame can be provided with steel supporting legs, or suspended overhead. End idler and intermediate take-ups are easily adjusted for proper belt tension. Complete conveyor systems can be designed to suit plant layout. Made by **Moore Dry Kiln Co.**, 1220 W. State St., Jacksonville 1, Fla.

▲ For more details circle NED-570 J9 on enclosed inquiry slip ▲

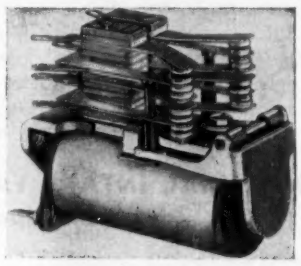
O-RINGS
of Rulon are self-lubricating



High wear resistance and low coefficient of friction even under completely nonlubricated conditions are advantageous properties of O-rings made of Rulon, a modified Teflon. Reinforcing agents in the plastic greatly decrease deformation under high loads and temperatures, and cut thermal expansion by one-half. Seals will not twist or "snake" in rotating applications. They are completely inert to all common fluids and can be used at temperatures from −320 to 500° F. Made by **Dixon Corp.**, Bristol, R. I.

▲ For more details circle NED-571 J9 on enclosed inquiry slip ▲

AC RELAY
for up to 15-amp, 115-v ac loads



Contact combinations up to four-pole double-throw are available on the 60-cycle ac Class 66A telephone type relay. It has shaded pole construction and short operating-arm-to-armature ratio for maximum contact pressures. Contacts range from bifurcated twin gold alloy types for low level switching to heavy duty power contacts for switching up to 15 amp at 115 v ac noninductive load. Furnished for up to 250 v operation, relay is offered in open style, with dust cover, or with hermetically sealed enclosures. Made by **Magnecraft Electric Co.**, 3350K W. Grand Ave., Chicago 51, Ill.

▲ For more details circle NED-572 J9 on enclosed inquiry slip ▲

Short Run Stampings CUT COSTS 9 WAYS

New FREE Federal Catalog #301 lists 9 areas of product development and production where money can be saved by Short Run Stampings. Also gives many design tips to reduce stamping costs. *Write for your FREE copy today!*

QUALITY STAMPINGS **FEDERAL** IN SMALL QUANTITIES

3 PLANT LOCATIONS

FEDERAL TOOL & MFG. CO.
3618 Alabama Ave., Mpls. 16, Minn.

FEDERAL SHORT RUN STAMPING, INC.
918 Lyell Avenue, Rochester 6, N. Y.

FEDERAL STAMPING COMPANY
7318 Atoll Ave., No. Hollywood, Calif.

▲ For more details circle NED-573 J9 on enclosed inquiry slip ▲

FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from 1/8 pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

▲ For more details circle NED-574 J9 on enclosed inquiry slip ▲

New budget dryer for small dry-air needs

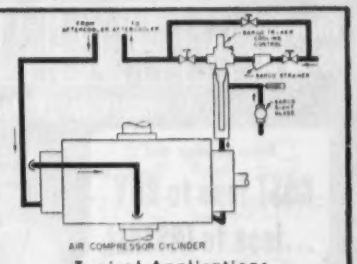
Here's LECTRODRYER's economical solution to small-scale requirements for extremely dry air or gas for instrument controls, electronics, pilot plant operations. This new Dryer *automatically* supplies up to 20 cubic feet per minute of air, dried to a dewpoint of −60°F or lower. Installation is simple, and the 68-pound unit can be handled by one man. Budget Dryer is low in first cost, designed for a minimum of attention.

Send for bulletin B6A and ordering information. Write Pittsburgh Lectrodryer Division, McGraw-Edison Company, 326 32nd Street, Pittsburgh 30, Pennsylvania.

Lectrodryer® McGRAW EDISON

▲ For more details circle NED-575 J9 on enclosed inquiry slip ▲

Sarco Self-Powered Cooling Control



Typical Applications

Compressors, small engines, oil coolers, water cooled rolls, dry cleaning stills, condensers, ball grinding mills, etc.

COOLING CONTROL

protects equipment and product quality

Trying to control cooling by the hit-or-miss manual method is a pretty hopeless task. It's uncertain, sometimes dangerous . . . always costly. Wastes water.

In product processing, manual cooling control results in variable product quality, heavy rejects, production slowdowns.

You can end these problems with always-reliable Sarco SELF-POWERED Cooling Controls.

1/2" size . . . only about $37

Inexpensive. Simple. Requires no outside power source. Packless. Easy to install by any pipefitter.

Write for Bulletin 710B. Sarco Co., Inc., Empire State Bldg., N. Y. 1, N.Y.

2238-F

SARCO

▲ For more details circle NED-576 J9 on enclosed inquiry slip ▲

Ideal for Hot Weather Use!

New Efficiency

The sensational new FLEX-A-PRENE Paint Mask keeps out paint pigments and solvents with amazing efficiency, yet it's light (just 1 ounce), comfortable and so easy to talk and breathe through you hardly know you're wearing it.

New Economy

FLEX-A-PRENE's low first cost is only part of the story. Most important savings come from its endurance in service and time saved through less frequent filter replacements. You can expect at least 100 hours of exposure before filter replacement is necessary.

Sample: $1.50 postpaid
(INDUSTRIAL PRICE ONLY)

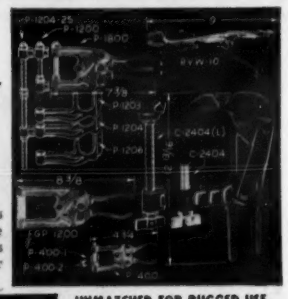
FLEXO Products, Inc. Westlake, Ohio

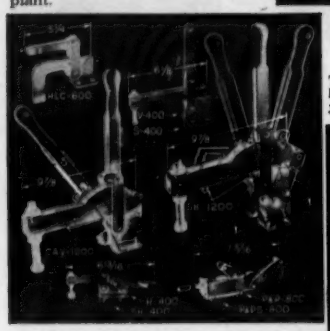
▲ For more details circle NED-577 J9 on enclosed inquiry slip ▲

THERE ARE KNU-VISE PRODUCTS TO MEET YOUR EVERY CLAMPING NEED
(OVER 150 MODELS)

LAPEER devices are the choice of leading manufacturers for all operations requiring fast and reliable clamping.

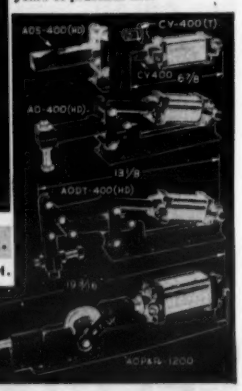
Recognized as clamping engineers we can give you much valuable assistance. We will gladly discuss your clamping problem at your plant.





UNMATCHED FOR RUGGED USE, DEPENDABILITY, SPEED AND LONG SERVICE

They were developed through exhaustive tests in laboratory and years of practical use.



LAPEER MANUFACTURING CO.
3062 DAVISON ROAD, LAPEER, MICH.

Manufacturers of over 150 models of manually and air-operated clamps and pliers.

WESTERN DIV.: PECK and LEWIS CORP. 4436 Long Beach Ave., Los Angeles 58, Calif.
CANADIAN DIV.: HIGGINSON EQUIP. SALES, 1131 Pettit Road, Burlington, Ontario

▲ For more details circle NED-578 J9 on enclosed inquiry slip ▲

THOMSON "Snap-In" **NYLINERS** of smooth, tough DuPont NYLON

Better bearings that
COST less to BUY*
...less to INSTALL
ELIMINATE LUBRICATION!

Additional Benefits:

- CLOSE FIT
- LONGER LIFE
- EASILY INSTALLED
- LESS SERVICING
- SELF-RETAINING
- RESIST CORROSION
- LOW FRICTION
- RESIST POUNDOUT
- NO FRICTION OXIDATION
- DAMP VIBRATION
- OPERATE IN LIQUIDS
- NON-CONTAMINATING
- INSTANTLY REPLACEABLE
- RESIST ABRASION
- MINIMUM SPACE
- SILENT OPERATION
- LIGHTEST WEIGHT
- REDUCED WEAR

NYLINER Bearings are a highly engineered thin liner of DuPont Nylon, designed to bring bearing users the many benefits of Nylon as a bearing material by solving most of the limitations surrounding its use. The compensation gap principle assures maintenance of diametral tolerances for precision applications.

Seven Standard Types available from stock. Write for literature and name of your local representative who stocks NYLINER Bearings for immediate shipment.

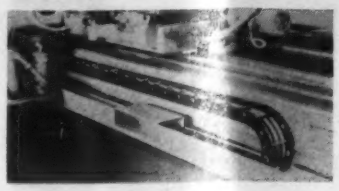
*In production quantities at new, REDUCED PRICES

THOMSON INDUSTRIES, Inc.
DEPT. 9, MANHASSET, NEW YORK

Also— —Manufacturers of BALL BUSHINGS . . . the Ball Bearing for Linear Motions and 60 CASE . . . Hardened & Ground Steel Shafting

▲ For more details circle NED-579 J9 on enclosed inquiry slip ▲

MULTIPLE CABLE CARRIER for use on equipment in motion holds up to 2½-in. cable, hose

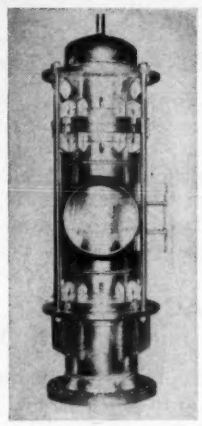


West German developed Powertrak carrier for cable or hoses is designed to be used on machine tools, cranes, or foundry equipment in motion. It consists of special chains, connected by cross-stays which carry the cable and hose. Individual links move on hinged joints only as far as angled contact faces permit. This controls turning radius of cable or hose to prevent kinking.

Powertrak protects cable and hose from abrasion, wear, tension, or strain. It handles any number of flexible cables and hoses with up to 2½-in. diameter, is self-supporting up to about 15 ft, and provides up to 30 ft of travel at moving speeds to 300 fpm. Chain links provide for standard curvature radii of 9, 12, 15, and 20 in. Made by **Gleason Reel Corp.**, 740 N. Plankinton Ave., Milwaukee 3, Wis.

▲ For more details circle NED-580 J9 on enclosed inquiry slip ▲

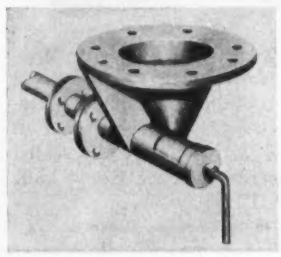
EXPANSION JOINTS absorb pipeline movement



Pressure-balanced expansion joints are installed at elbows or points where pipe lines change direction to absorb movement without imposing pressure thrust. A counterbalancing outer bellows absorbs line pressure where anchoring is not practical. Units protect turbine housings and exhaust connections, condensers, pumps, and rotating equipment. Diameters from 3 in. to 50 ft are available for temperatures from −320 to 1600° F and pressures up to 2500 psi. Nonequalizing, self-equalizing, and HyPTor type bellows are offered, the last being for low pressure, high temperature use. Made by **Zallea Brothers**, 815 Locust St., Wilmington 99, Del.

▲ For more details circle NED-581 J9 on enclosed inquiry slip ▲

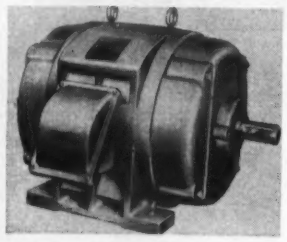
MATERIAL INTAKE VALVE for 2 to 6-in. pipe lines



This intake valve can be used with high vacuum pneumatic systems handling dry, free-flowing, powdery, or granular materials from hoppers, bins, and dust collectors. Valves are used on 2 through 6-in. pipe lines and are equipped with standard 8-in. flanges. Rate of material intake can be adjusted while air is flowing. A separate air inlet prevents connected equipment from exposure to full suction of vacuum system. Valve design thoroughly mixes air and material to assure nonclogging flow. Made by **U. S. Hoffman Machinery Corp.**, Air Appliance Div., Dept. EM, 103 Fourth Ave., New York 3, N. Y.

▲ For more details circle NED-582 J9 on enclosed inquiry slip ▲

DRIPPROOF MOTORS ½ to 150 hp rerated frame sizes



Rigid cast iron frames with integrally cast feet and cast iron endbells with precision machined registers and bearing fits are features of dripproof line of electric motors. They have NEMA rerated size 182 to 445 URS frames and ratings from ½ hp at 900 rpm to 150 hp at 3600 rpm. Connection boxes can be rotated for easy connecting. Diecast aluminum rotors have dual cooling fans, and the rotor assembly is dynamically balanced. Sealed, prelubricated bearings are used. Stator windings are impregnated with a moisture resistant, thermosetting insulating varnish. Two and three-phase motors are offered in all frequencies and voltages up to 600 v. Made by **Lima Electric Motor Co.**, Dept. 124, Lima, Ohio.

▲ For more details circle NED-583 J9 on enclosed inquiry slip ▲

Cover up rubbish, scrap. Stop "match throwing" fires. United lids are low cost; bonderized to resist corrosion; feature two doors. Adjustable screws assure rigid fit. Catalog on request.

UNITED METAL CABINET CORP.

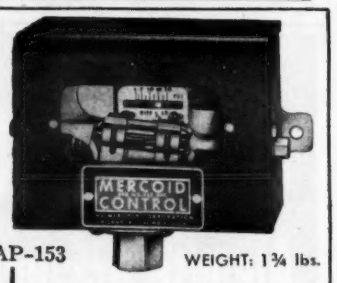
UNITED

8 East 36th St., New York • Factory: Pottsville, Pa.
• Midwest Sales Office: 666 Lake Shore Drive, Chicago, Ill.
• West Coast Distributor: Shore-Calnevar, Inc., 2881 East Pico Blvd., Los Angeles, Calif.

• Custom Engineered Waste Receptacles •

▲ For more details circle NED-584 J9 on enclosed inquiry slip ▲

NEW SMALL, LIGHTWEIGHT **PRESSURE CONTROL**



AP-153 WEIGHT: 1¾ lbs.

FOR MEDIUMS NOT INJURIOUS TO STEEL OR SILVER SOLDER

EXTERNAL ADJUSTMENT

CALIBRATED DIAL

HERMETICALLY SEALED MERCURY SWITCH

VISIBLE CIRCUIT

CASE: NEMA 1—Heavy gauge steel, cadmium plated. Steel cover (with glass front).

WRITE FOR BULLETIN 02

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILL.

OPERATING RANGE

Adjustable Operating Range	Differential Fixed (Factory Set)	Maximum Surge Limits
1 to 20 psig	0.5 psig.	30 psig.

CIRCUIT

SP-DT HERMETICALLY SEALED MERCURY SWITCH (4A. 115V., 2A. 230V.)

Provides any of following operations:

1. *Single Pole—Cut-in high (close on rise)*
2. *Single Pole—Cut-in low (open on rise)*
3. *Single Pole—Double Throw*

▲ For more details circle NED-585 J9 on enclosed inquiry slip ▲

★★★★★ ★★★★★

IN EVERY FIELD, THERE IS ONE FOREMOST NAME . . . IN SONIC ENERGY, THAT NAME IS BENDIX

RADIOISOTOPES PROVE EFFICIENCY OF BENDIX SONIC ENERGY CLEANING

How clean is clean? For *some* parts and assemblies cleanliness is highly critical, and visually clean surfaces—even microscopically or chemically clean surfaces, may not be clean enough!

A prominent manufacturer of electronic data processing and computing equipment had this problem. Circuit boards, which tested satisfactorily, failed later in the field. Suspecting hidden traces of contamination left from his conventional cleaning methods, the manufacturer sought help from the Bendix Sonic Energy Applications Laboratory.

There, using a radioisotope test (Bendix has pioneered this method of testing Sonic Energy Cleaning effectiveness), minute quantities of soldering flux—enough to absorb moisture and short-cut the circuitry—were discovered even after thorough conventional cleaning.

The boards were then cleaned by the Bendix Sonic Energy method. The radioisotope test results showed that Bendix Sonic Energy Cleaning, using an inexpensive water-based detergent solution, completely removed all the flux that caused the problem.

It will pay you to investigate Bendix Sonic Energy Cleaning.

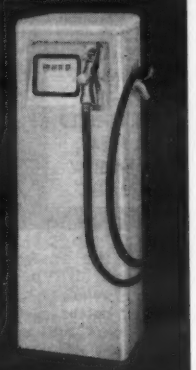
FREE! ALL THE FACTS ON SONIC ENERGY CLEANING AT YOUR FINGERTIPS

Is Sonic Energy Cleaning economical for your operation? Find out for yourself with the Five-Step Plan outlined in this report. All processes fully detailed . . . case history results analyzed . . . the complete story of this remarkable new method of industrial cleaning. Write for your copy: PIONEER CENTRAL DIVISION, BENDIX AVIATION CORPORATION, 2737 HICKORY GROVE ROAD, DAVENPORT, IOWA.

Bendix AVIATION CORPORATION — SONIC ENERGY CLEANING

▲ For more details circle NED-586 J9 on enclosed inquiry slip ▲

FLEET JR.
GASOLINE PUMP



Faster, easier, safer refueling — direct drive rotary vane pump delivers up to 12 gpm over a 10-foot lift. Padlock provision ends pilferage.

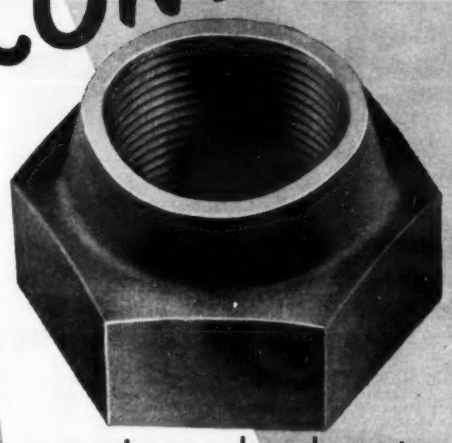
51 inches high — convenient nozzle location and easy-to-read tilted dial face. Helps you control fuel costs. Sturdy steel construction — lowest maintenance costs.

Available with lighted dial face.

JOHN WOOD COMPANY
BENNETT PUMP DIVISION MUSKEGON, MICHIGAN
IN CANADA: JOHN WOOD COMPANY LIMITED
Toronto • Montreal • Winnipeg • Vancouver

▲ For more details circle NED-587 J9 on enclosed inquiry slip ▲

NEW CONELOK



one-piece locknut . . . *with prevailing torque*

Three sectors of the tapered portion of the CONELOK nut are preformed inwardly (Fig. 1). When the Nut is applied to a bolt, these conforming sectors are elastically returned to a circular configuration and create an inward and downward pressure which produces intimate contact between the load carrying flanks of the nut and bolt threads (Fig. 2). The shape of the cone sector displacement insures conformity with the mating bolt and maximum friction contact area. . . . The closed stress path in the locking portion of the nut and the advantageous distribution of locking pressure, produce a locking device of high fatigue life . . . and equivalent locking force is exerted at only a fraction of the stress of any slotted type locknut. CONELOK maintains its locking action through many re-applications. . . . It is adaptable to high, and low torque assemblies . . . to high torque stop-nut applications . . . and may be obtained in sizes from No. 10 to 1½", Full and Thick dimensions are "Standard".

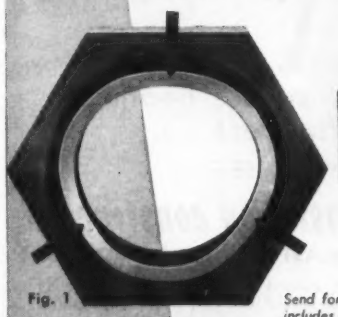


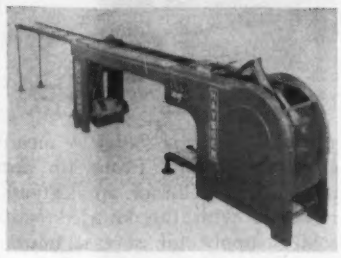
Fig. 1 Fig. 2

Send for brochure which includes complete engineering specifications.

NATIONAL MACHINE PRODUCTS COMPANY
an SPS company 44250 UTICA ROAD UTICA, MICH

▲ For more details circle NED-588 J9 on enclosed inquiry slip ▲

HORIZONTAL PACKAGING MACHINE
for nonuniform products and goods uses any heat sealing material



Automatic packaging of nonuniform products and goods that are regularly hand wrapped, or machine - wrapped with support, is function of this Model RT horizontal packaging machine. It forms the package independent of the item being wrapped and makes use of any heat sealing material.

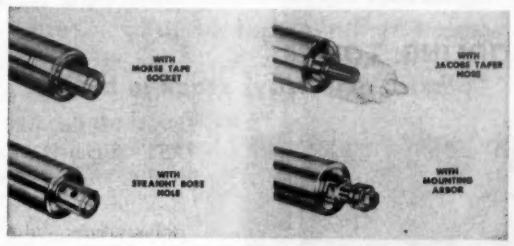
As material is pulled toward the back sealer, film is folded over the product and passes under back sealing iron. Product then moves on to the end sealing bars positioned on a rotating drum. Jaws seal the bottom of the first package and the top of the second package in one operation. Held in the sealing jaws, package follows the drum to the discharge conveyor where it is released. Product never contacts machine parts.

Resistance heaters are used for regular sealing materials, whereas with unsupported polyethylene and other plastic materials, impulse sealing method is used. Electric eye length registration is possible. Made by **Hayssen Mfg. Co.**, 1305 St. Clair Ave., Sheboygan, Wis.

▲ For more details circle NED-589 J9 on enclosed inquiry slip ▲

CARTRIDGE SPINDLE ASSEMBLIES
in five types of spindle noses for mounting small cutting tools

Expanded line of cartridge-type spindle assemblies for mounting end mills, milling cutters, drills, taps, reamers, slitting saws, and special tools comprises 28 models



in four basic sizes. Morse taper socket, straight bore hole, Jacobs taper nose, arbor-type nose, and a blank spindle end for machining by user are available. Nominal cartridge diameters are 1.250, 1.625, 1.875, and 2.750 in.

Plain and positioning-nut types permit various mounting methods to fit the application. Spindles run on prelubricated, sealed ball bearings—a matched pair of preloaded, single-row bearings at the tool end and one single-row bearing at the rear or driven end. Made by **Russell T. Gilman, Inc.**, 623 Beech St., Grafton, Wis.

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Here's Reliable Power

WAGNER INDOOR DRY-TYPE DISTRIBUTION TRANSFORMERS

These new quiet-type transformers are compact, light in weight, provide a flexible, modern power system to change higher-voltage distribution service to lower-voltage lighting and power circuits . . . meet all indoor installation safety requirements. Ask for Bulletin TU-221.

WT59-10 6435 PLYMOUTH AVENUE ST. LOUIS 14, MO.

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BRUSHES • CAPACITORS • COMMUTATORS

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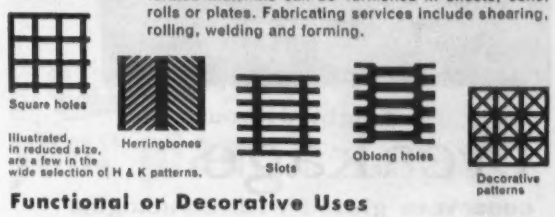
LET H&K PERFORATED MATERIALS
put personality into your products

Round holes

When your products require perforated materials, you will find the pattern "just right" for that custom look in the vast selection of H & K existing dies.

H & K facilities enable the perforating of practically all metals, wood, compositions and plastics. Perforated materials can be furnished in sheets, coils, rolls or plates. Fabricating services include shearing, rolling, welding and forming.



Illustrated, in reduced size, are a few in the wide selection of H & K patterns.

Functional or Decorative Uses

For whatever purpose perforated materials are required, H & K can fill the need. Appropriate metals can be ordered with color anodized, brushed and lacquered, painted, chrome plated, baked-on, or other special finishes.

Many patterns in steel sheets are in stock. Send for H & K Stock List Brochure.

FIND NEAREST H & K AGENT in the "Yellow Pages" Listed Under "Perforated Metals"

Write for General Catalog No. 75, Today!

THE Harrington & King PERFORATING CO. INC.

Chicago Office and Warehouse • *New York Office and Warehouse*
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Higher Vacuum . . . Suction . . . Pressure with Smaller LEIMAN AIR PUMPS

Exclusive Hinged Vane Design provides 2 to 3 times more air space per size and weight of pump

Leiman simplified design has fewer moving parts. All parts made of durable cast iron and steel (not composition). Take up their own wear to give "lifetime" service. No gaskets or packing — no tips to renew — no troubles — little maintenance. Quiet operation. Every pump tested. Wide range of models and sizes in Vacuum to 29.9" hg., Pressure to 20 psig., Volume to 162 cfm. Write for 16-page Catalog and Application Book showing dozens of "how-to-do-it" blueprints.

LEIMAN BROS., Inc., 167 Christie St., Newark 5, N. J.

LEIMAN Rotary Positive AIR PUMPS

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INTRODUCING THE PRECISION-BUILT

BULLDOG
STEEL LIFTING CLAMP

½ Ton to 7 Ton

- Efficient — Rugged
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- Larger Jaw Opening
- Compact in Size
- 5 to 1 Safety Factor

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Renfroe safety snap lock clamps
Safest steel lifting clamp available
Write for full line catalogue

Safety Snap Lock

J. C. RENFROE & SONS, INC.
1926 SPEARING STREET JACKSONVILLE, FLORIDA

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for light without

breakage...

GOODYEAR glazed with Structoglas

Goodyear installed Structoglas glazing in its new Akron plant to eliminate glass breakage, periodic painting and puttying of sash – form a weather-tight source of natural light. And Structoglas "SE" fiberglass panels, used by Goodyear, are approved by Underwriters' Laboratories and Factory Mutual. Improve lighting and eliminate breakage in your plant–glaze with Structoglas and *save*.

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structoglas®

Structoglas Inc., Dept. 906, Cleveland 9, Ohio 5903

For more details circle NED-596 J9 on enclosed inquiry slip

For more details circle NED-597 J9 on enclosed inquiry slip

"HYDROWAY®" world's most practical all purpose dynamometer and it's hydraulic

Model pictured shows Pre-Set Pointer, Used for Setting—Not to Exceed Loads, etc.

"HYDROWAY" Hydraulic Dynamometers are for practically all kinds of heavy duty weight and tension measurement for cable anchoring devices; equalizing guy-wire tension; measuring suspension bridge strain and for use as traction dynamometers. HUNDREDS OF USES: Such as Torque testing, Tensile testing, Traction testing. Can be used as a hanging scale for weighing, check weighing and inventory material weighing.

"HYDROWAY" Dynamometers are accurate; portable; compact; ruggedly built; maintenance free.

• CAPACITIES 0-5000 pounds to 0-10,000 pounds • Dial diameter—6" • Weather proof • No oiling or fluid required • Permanently sealed • Economically priced

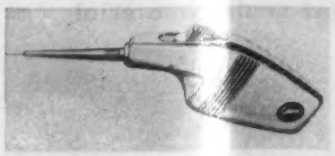
Guarantee: All "Hydroway®" Dynamometers are guaranteed to be free of defects in workmanship and materials.

Made by the originators of *"HYDROSCALE®"*
(world's largest manufacturers of Hydraulic Crane Scales).

HYDROWAY SCALES, INC.
31288 STEPHENSON HIGHWAY • ROYAL OAK, MICH.

For more details circle NED-598 J9 on enclosed inquiry slip

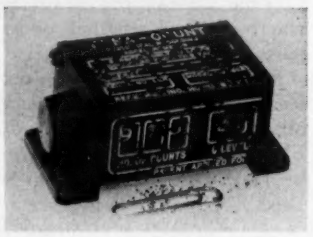
SOLDER DISPENSER
speeds up difficult soldering jobs



Soldering operations in difficult-to-reach wiring locations are simplified with this solder ejector-feeder. It dispenses just the proper amount of solder by means of fingertip-operated knurled control. Probe tip provides needed backup pressure at point of application. Solder wire can be retracted with the knurled control as well. A wire solder supply for several hours is contained in the main body of the unit, and detachable cover facilitates reloading. Straight and angle-form probes in various lengths and radii are available. Made by **International Electronic Research Corp.**, 145 W. Magnolia Blvd., Burbank, Calif.

For more details circle NED-599 J9 on enclosed inquiry slip

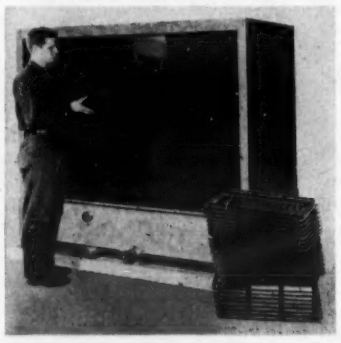
SHOCK RECORDER
counts bumps of package in transit



Mechanical shocks or bumps received by packages in transit can be counted by the Dyna-Count recording accelerometer. It counts up to 999 the number of shocks which equal or exceed a preset G-level and responds to only those accelerations which are perpendicular to the mounting surface. Device mounts on any flat surface and can be used in banks, each unit of which can be set for a different G-level. It is typically used to evaluate cushioning effect of protective packaging, to test vehicle springing or road bumpiness, or to analyze structural strength. Made by **Research, Inc.**, 115 N. Buchanan, Hopkins, Minn.

For more details circle NED-600 J9 on enclosed inquiry slip

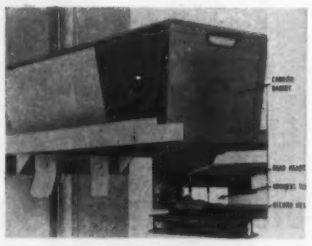
COOLING TOWER
plastic drip trays stack in blocks



Deck of the Model AST Econ-O-Mizer cooling tower consists of a series of polystyrene drip trays stacked in removable building-block units in the housing. Each drip tray has more than 600 individual, controlled drip spouts which are staggered to pass water slowly downward from one tray to the next. Gravity-type pans distribute water evenly over deck surface. Larger models 264, 285, and 296 have dual cooling chambers, two incoming water distributing pans, dual fans and motors, a single sump, and a full height dividing wall between sections. All models have water control valve, overflow, drain, pump suction fittings, and debris screens. Made by **Acme Industries, Inc.**, 600 N. Mechanic St., Jackson, Mich.

For more details circle NED-601 J9 on enclosed inquiry slip

MAGNETIC CONVEYOR CONTROL
dispatches to up to 64 destinations



Selective dispatching to as many as 64 different receiving stations is possible with Maitrol magnetic control for conveyor systems. A magnetic address can be impressed on a product, package, tote box, or a conveyor belt. A pushbutton is provided at a dispatch station corresponding to each of the magnetically coded addresses or destinations. Each destination or receiving station has a magnetic reading head which selects the package "addressed" to it by the magnetic code. Switch is actuated to remove the product or package from the conveyor as preselected at the dispatch station. System is adaptable to vertical and horizontal single or multiple floor materials handling installations. Developed by **Maico Electronics Inc.**, 21 N. Third St., Minneapolis 1, Minn.

For more details circle NED-602 J9 on enclosed inquiry slip

NEW! COMPACT POWER SWEEPER Priced for Small Plant Budgets!

Priced as low as $1475

Here's the answer for efficient power sweeping for plants of all types and sizes. The new WAYNE "704" power sweeper is smaller yet engineered to sweep faster, better....in and around tight spots, closer to machinery and equipment.

Superior features in every way—

1. No dust bag to empty. Dust-free operation.
2. More effective dirt hopper capacity.
3. Powered and geared for all sweeping conditions.
4. Longer-wearing brushes get all the dirt.
5. Vacuum cleaning attachments available.

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new WAYNE '704'

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World's Largest Producer of Power Sweepers for Cities and Industry

For more details circle NED-603 J9 on enclosed inquiry slip

MANEUVERABILITY IN THE SKY AND ON THE GROUND...

See both, at Sikorsky Aircraft, Division of United Aircraft, Stratford, Conn. In the air, "grasshoppers" are hovering about; on the lawns, equally versatile and highly maneuverable power "grass cutters" are at work.

Naturally, the deluxe lawns are cut and trimmed with the Locke Triplex. Locke's exclusive Counter Balance and Full Floating units assure smooth, perfect trimming...maneuverability that practically eliminates all secondary hand trimming.

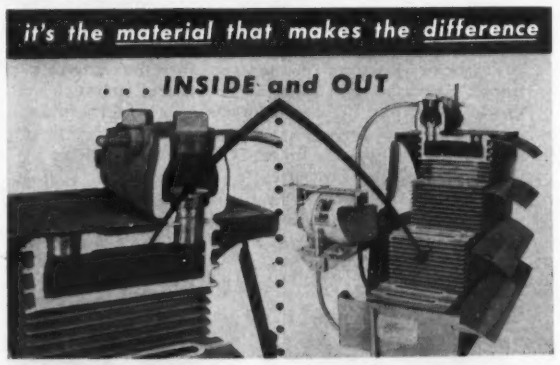
If *your* grass, time, money is worth saving...get the facts from a Locke Service Dealer, or write.

Locke POWER LAWN MOWERS
1087 CONNECTICUT AVE., BRIDGEPORT 1, CONN.

A product of Locke Steel Chain Co.

For more details circle NED-604 J9 on enclosed inquiry slip

it's the material that makes the difference



CORROSION causes heating equipment failures!

BUT NOT WHEN YOU USE

GRID *cast iron construction*

▶ UNIT HEATERS ▶ BLAST HEATERS ▶ RADIATORS

CORROSION internally, caused by electrolytic action as in copper tubes, can't happen in GRID's cast iron steam chambers and headers. Nor can acid condensate corrode the bottom connections. Cast Iron, internally, resists corrosion. CORROSION externally, caused by acid fumes cannot destroy GRID's cast iron finned heating surface. Widely spaced fins cast integral with the steam chamber will not corrode externally.
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WAUSAU, WISCONSIN OFFICES IN PRINCIPAL CITIES

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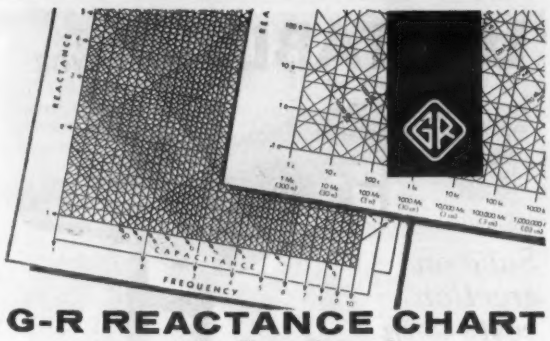

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... It's For Free!

To two or three significant figures you can find:

Reactance of a given inductance and capacitance at a given frequency.

Resonant Frequency of a given inductance and capacitance

Ranges:
1 cycle to 1,000,000 Mc.
.1 μμf to 10,000 μf
.1 μμh to 10,000 h
.1 ohm to 10 megohms

Single decade enlarged 7 times for accuracy
Two Sizes: Wall Chart 22" x 17"
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In **CANADA:** 99 Floral Parkway, **TORONTO 15**

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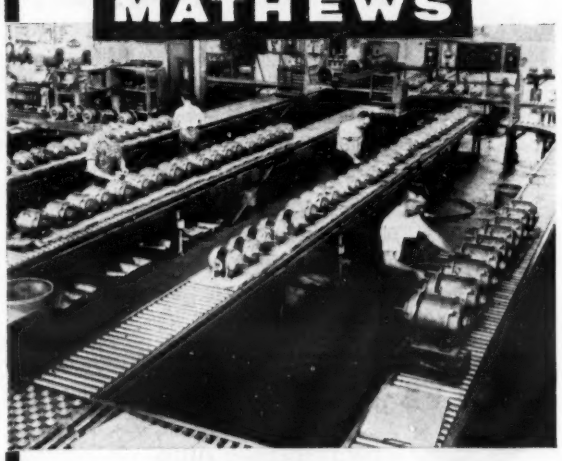
A COMPLETE LINE OF
ROLLER CONVEYERS
ENGINEERED AND STANDARDIZED BY
MATHEWS



The Mathews line of roller conveyer is complete, with rollers ranging from 1⅜" to 6½" in diameter, and with capacities from 60 lbs. to 13,000 lbs. High quality ball bearings are used throughout.

Accessories such as turntables, hinges and switches are available from stock.

A full line of couplings and supports makes the installation of Mathews Roller Conveyer lines convenient and easy.

For latest information write for Catalog 158

MATHEWS CONVEYER COMPANY
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CANADIAN DIVISION . MATHEWS CONVEYER COMPANY, LTD., PORT HOPE, ONTARIO.

MATHEWS
Over Fifty Years of Leadership in Mechanized Handling

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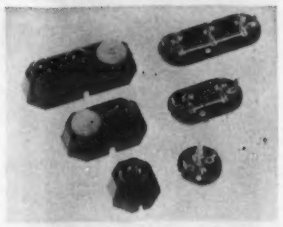
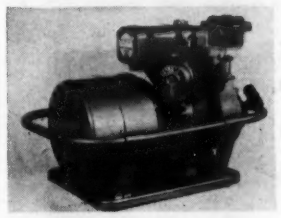
INDICATOR LAMPS
for intercommunication, signalling



Installed with or without concealed wiring, these factory, warehouse, and office indicator lamps use standard 6, 12, 24, or 48-v switchboard lamps. They can be used for intercommunciation or other type of signalling. One-lamp unit with white, ruby, or green lens, two-lamp unit with several lens color combinations, and three-lamp unit with white, green, and ruby, or other lens combinations, are available. Holes permit fixed mounting with wood screws. Made by **Suttle Equipment Corp.**, 135 S. LaSalle St., Chicago 3, Ill.

▲ For more details circle **NED-608 J9** on enclosed inquiry slip ▲

POWER PLANT
in 500 to 5000 w sizes



Semibrushless, lightweight power plant which utilizes vertical type slip rings is available in 500 to 5000 w sizes. Small rectifier assembly mounted on the bearing end brace changes a portion of the ac output of the generator to dc for excitation. This conversion method replaces the commutator normally used. All normal maintenance can be done at the open end of the generator. Pancake type generator mounts on a Clinton air-cooled engine with recoil starter and carrying handles. Made by **Katolight Corp.**, First Avenue at Chestnut, Mankato, Minn.

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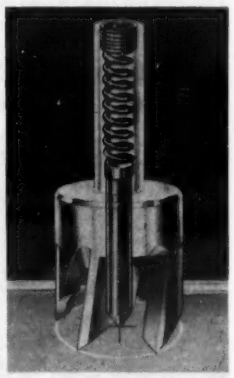
HOLE BORING TOOL
makes undistorted, bur-free holes



Accurate, undistorted, and bur-free round holes in heavy gage sheet and plate materials and cylindrical and spherical forms, including pipe and tubing, are produced with the Roto-Bor tool. Previously offered in a model for very thin metals, plastics, fibers, and rubber, this new model retains the axially retracting center point for accurate positioning without center punching. Stock sizes from 3/16 to 2 1/32 in. are available in increments of 1/64 in. with straight or Morse taper shanks. Larger and special sizes can be ordered. Made by **Jancy Engineering Co.**, 508 S. Pine St., Davenport, Iowa.

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CLEVELAND SILENT VIBRATOR REDESIGNED

Cleveland Vibrator's RC-50 Quiet Electric Bin Vibrator has been redesigned, making it more compact and more powerful.

The new RC-50 develops an impact force of 2250 pounds and weighs only 84 pounds. It is used to vibrate bins, expediting the flow and handling of bulk materials such as sand, flour and concrete.

The RC-50 operates on the rotating eccentric weight principal and is very quiet. Two cam like weights are rotated at 3600 rpm. to develop the vibrational force. Adjustable weights permit varying the vibration impact between 750 and 2250 pounds.

Cleveland's new RC-50 is available for operation on 110, 220, 440 or 550 volts. Rotary electric vibrators require much less maintenance than electric reciprocating vibrators. In fact, the RC-50 requires no more maintenance than a standard a-c. motor.

Write today for complete details, including prices.

THE CLEVELAND VIBRATOR CO.
9K-2744 Clinton Avenue • Cleveland 13, Ohio

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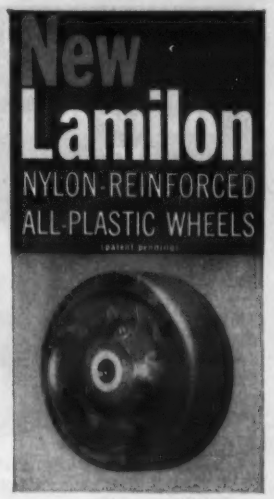
Now one wheel for any section of your plant



Now you standardize on one wheel for all your materials handling equipment. Fairbanks "Lamilon" Wheels protect your floors, for they stay smooth and concentric, don't mar or mark. Not affected by oils and greases, "Lamilon" Wheels have very high resistance to most chemicals, and have a water absorption factor almost as low as high quality rubber. With their alloy steel roller bearings, hardened steel outer race and provision for pressure lubrication, "Lamilon" Wheels roll easier, last longer and give more dependable service than any other plastic wheel.

Available in sizes 3 through 12 inches. Can be furnished with thread-tight thread guards.

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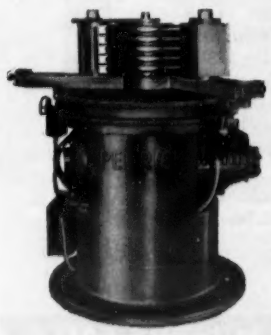
extra!
ALL ABOUT THE LATEST BENDING METHODS

Let Pedrick show you how the latest methods of bending pipe, tube and structural metal—on a job or production basis—can save you money.

For full information on Pedrick Production Benders, write PEDRICK TOOL AND MACHINE CO 3640 N. Lawrence St., Phila. 40, Pa. Dept. 6



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PEDRICK production benders

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Single-End Suction SSV Pump—Equipped with enclosed impeller for clear liquids such as oils, chemicals, juices, acids, etc., or, open impeller for slurries, white water, sluggish liquids. Bulletin #107.

EFFICIENT, DEPENDABLE AND DURABLE FREDERICK PUMPS FEATURE:
INDIVIDUALLY DESIGNED IMPELLERS
INTERCHANGEABLE PARTS FOR FAST, EASY REPAIR
AVAILABLE IN ANY METAL OR ALLOY FOR SPECIAL APPLICATIONS

There's a complete line of Frederick Pumps available. Single and double suction, single and multi stage pumps, including process, paper mill, circulating and boiler feed pumps, motor pump units and vertical pumps. Write for full information and name of nearest representative.

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Manufacturers of industrial and municipal products including Drop Balls, Manhole Covers & Frames, Stokers, Shears, Contract Castings.

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Barry Machine Mounts
CUT MAN-HOURS 90%

In new installations —
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you get savings like these!

3 man-hours instead of 42 man-hours to move machines at Johnson & Johnson

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No lost production time in moving a complete machine shop at Wyman-Gordon

Barry Leveling Machinery Mounts let you move machines wherever they are needed, and have them in full production in minutes — with no delays for drilling, lagging, or shimming.

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BARRY B MOUNT — SOLD THROUGH INDUSTRIAL DISTRIBUTORS
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For more details circle NED-615 J9 on enclosed inquiry slip

TOUGHER THAN NAILS!
MILLERS FALLS NEW POWER BITS

These new, heavy duty, power bits slice through ordinary nails ... screws ... obstructions. High speed steel blades. The efficient, economical way to drill large holes up to 1½" diameter! Shanks have 3 flat sides for secure grip in ⅜" or larger chucks. Fit any ¼" electric drill with Millers Falls new Shank Adapter or Quick-Change Chuck. Bits priced from $1.65 to $2.50.

8 SIZES
⅝" UP TO 1½"

MILLERS FALLS TOOLS SINCE 1868

MILLERS FALLS COMPANY
Dept. NED-10
Greenfield, Mass.
For more details circle NED-616 J9 on enclosed inquiry slip

Remember!
PALMETTO Packings
— pack more performance into every application

GET THEM at any industrial distributor authorized to carry Palmetto Packings . . . For the name of a supply house near you consult our insert in Thomas Register—between pages 4816-4817.

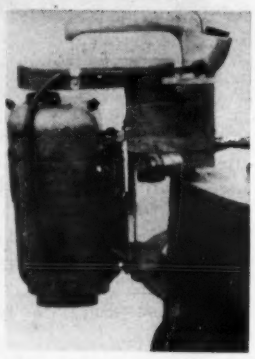
GREENE, TWEED & CO.
North Wales • Pennsylvania
For more details circle NED-617 J9 on enclosed inquiry slip

COUNTER & CONTROLLER suited for machines and processes

Option of one-count switching, one-cycle switching, and differential (add and subtract) counting and switching is offered by the Cyclo-Master automatic recycling counter and controller. Typical uses are liquid metering control, interval indication in high production count, forward and reverse control with preset limits, container filling, size control for wound reels or spools, and control of motors, valves, pumps, relays, and signals. Unit recycles between successive cycles. It makes up to 1000 counts per minute and can be reset to any cycle from 1 to 100 counts. It operates on 115-v ac. Made by **Counter & Control Corp.**, 4503 W. Brown Deer Rd., Milwaukee 18, Wis.

For more details circle NED-618 J9 on enclosed inquiry slip

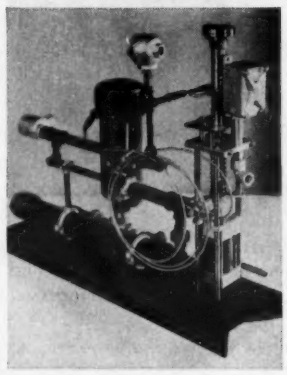
STEEL DRUM OPENER leaves a smooth, lapped edge



Powered by a ⅓-hp Westinghouse gearmotor, the Wizard steel drum opener will cut the heads from 5 to 60-gal steel drums, leaving a smooth, lapped edge. It attaches to the top of the drum and can be adjusted to remove the inner top and upper seam as a unit. Motor propels the opener around the drum smoothly, even on crimped or dented edges. Long lasting cutters are easily replaced. Opener weighs 50 lb and sells for $285. Made by **Krist Machine Works**, 731 S. Second St., Milwaukee 4, Wis.

For more details circle NED-619 J9 on enclosed inquiry slip

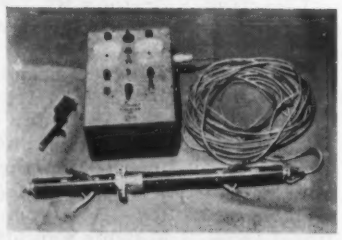
PIPELINE VISCOSIMETER has accurate temperature control



Viscosity of liquids flowing in pipelines is measured accurately with this viscosimeter, and the viscosity time signals are electrically transmitted for recording or controlling. It has an accurate temperature control. The first stage is self-contained and normally cooling. The second is an electronically controlled electric heating unit. It is applicable to side stream to maintain the measuring temperature accurately. Made by **Norcross Corp.**, Dept. N27, 247 Newtonville Ave., Newton 58, Mass.

For more details circle NED-620 J9 on enclosed inquiry slip

PIPE INSPECTION INSTRUMENT checks internal surface condition and registers location of defect



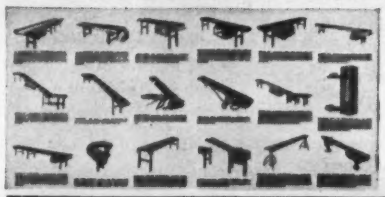
Complete and accurate inspection of internal surface condition of 2 to 10-in. diameter tubing and piping is possible with the Tubescan 105. It determines pitting, bulging, uniform and erratic corrosion, tool cutting, coke and scale buildup, or circumferential profile at any point. It also measures inside diameter on demand. Defect is located relative to working end of the tube in feet.

As probe is drawn slowly through tube, spiral pattern advances about 1/16 in. per revolution, covering the entire internal surface. Defects from 0 to 0.3 in. deep are measured to within 0.01 in. The 6 v dc unit contains its own permanent power supply. It adapts to purging pipe with inert gases, air, or CO_2 as an explosionproofing measure. Made by **Union Industrial Equipment Corp.**, 40 Beech St., Port Chester, N. Y.

For more details circle NED-621 J9 on enclosed inquiry slip

UNITABLE® BELT CONVEYOR
A versatile, portable conveyor for inspection, assembly, packaging.

Save on erection costs with UNIBILT® Conveyors and Engineered Systems



Send for new UNIBILT® Bulletin
Illustrates and describes complete line of conveyors and systems and contains helpful application data.

CONVEYOR SPECIALTY COMPANY, INC.
35 years' Experience Means Dependable Quality and Engineering
37 Newport Avenue, North Quincy 71, Massachusetts
For more details circle NED-622 J9 on enclosed inquiry slip

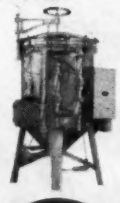
positive filtration
(to ½ Micron) for as little as
.00015¢ per gallon!
And it's completely automatic!

Now, from Olson, the first completely automatic, pressure-type filter! Every cycle—precoat, run, backwash—is automatically controlled. Injection of filter-aid (when used) and sludge carry-out are also automatic.

Maintenance is virtually eliminated in this trouble-free system. No parts to change, no elements to replace, and most important, no costly downtime for cleaning!

In large central systems, or with individual machines, Olson Filters guarantee over 96% purification of all types of coolants at the lowest cost per gallon.

Write for free catalog on the new Olson automatic pressure-type filter which describes the 8 standard models from 10 gpm to 600 gpm capacities.



OLSON FILTRATION ENGINEERS
Division of The American Laundry Machinery Company
CINCINNATI 12, OHIO
For more details circle NED-623 J9 on enclosed inquiry slip

For heavy kegs—casks . . . for heavy rolls . . . for heavy crates—skids

"Marion"
Now...easy loading...easy handling ...high capacity DOLLY TRUCKS

FOR ALL IN-PLANT USES
- Stamping Plants
- Printers
- Supply Houses
- Binderies
- Newspapers
- Freight Docks
- Converters
- Boxmakers
- Textile Mills
- Warehouses
- Stores
- Movers
- Heavy Manufacturing
- Forges

Six styles to choose from!
No matter what you're handling, you'll find a Marion "high capacity" Dolly Truck to do the job. A complete line—easy loading...easy handling...rugged construction. Low wheel types...tilting action available...adaptable for wood platforms. Capacities from 2000 to 8000 lbs. Best ever in Dolly Trucks. Order from your jobber or write.

SEND FOR CATALOG

SIX DIFFERENT MODELS

Model	Size	Cap.	Model	Size	Cap.
No. 1	22¾x17¼x3½"	4000#	No. 5	30½x26x8¾"	4000#
No. 2	30x20½x3½"	4000#	No. 6	23x15¾x4½"	2000#
No. 3	30½x26x6½"	4000#	No. 7	30x17½x8¾"	8000#

CHICAGO MANUFACTURING & DISTRIBUTING COMPANY
1902 West 46th Street • Chicago 9, Illinois
For more details circle NED-624 J9 on enclosed inquiry slip

PUMPS most anything* THAT POURS!

*A few exceptions. Write for approved list.

Take the risk and waste out of liquid transfer! This rugged Tokheim Hand Pump, with alternate diaphragms, handles most anything from diesel oil to acetates—safely, quickly, without spillage. Eliminates fire hazards and accidents, aids good housekeeping. Accelerates production, too. Pumps 20 gallons per 100 strokes. Get list above from your Tokheim dealer, or write direct today.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Avenue Fort Wayne 1, Ind.

Subsidiaries: Tokheim N.V., Leiden, Holland—GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

▲ For more details circle NED-625 J9 on enclosed inquiry slip ▲

It's NEW!

SMOOTH-ON'S ALUMINUM

METALSET® A4

EPOXY RESIN IN TUBES!

Just squeeze equal lengths from each tube. Mix. Use. Take only what you need. Keep what's left for the next job.

Advantages of METALSET® A4

- No solvent to cause shrinkage
- Hence, use it in *any* thickness, all at one time
- Adhesive: to steel, iron, aluminum, glass, and all porous materials like wood and ceramics
- Hard: can be drilled and tapped
- Stable: waterproof, oilproof, chemically resistant
- Flexibilized against thermal and mechanical shock
- Not only is revolutionary epoxy-resin cement easy to use: — Metalset A4 is non-flammable, hardens at room temperature, and is made with minimum-toxicity materials only

TYPICAL APPLICATIONS...

- Stops leaks in pipes, tanks, concrete
- Bonds metal to metal, wood, concrete
- Smooths and fills dents in sheet-steel, aluminum
- Sets loose parts tight
- Caulks windows, roof fixtures, sidewalk elevators

METALSET.
Made by Smooth-On Manufacturing Company
ESTABLISHED IN 1895
572 Communipaw Avenue, Jersey City 4, N. J.

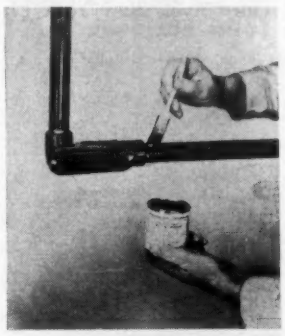
▲ For more details circle NED-626 J9 on enclosed inquiry slip ▲

STEEL LIFTING CLAMPS in ½ to 7-ton sizes

Light weight, compact size and large jaw opening capacity are among features of the Bulldog steel lifting clamp. It securely grips and holds sheet materials automatically. Made in ½, 1, 4, and 7-ton sizes, clamp incorporates these advantages over previous nonlocking and semilocking clamps. Made by J. C. Renfroe & Sons, Inc., 1926 Spearing St., Jacksonville, Fla.

▲ For more details circle NED-627 J9 on enclosed inquiry slip ▲

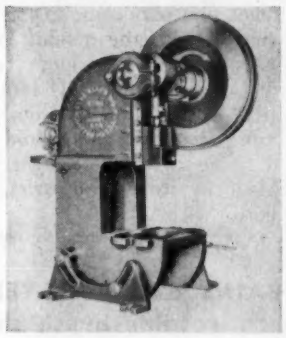
CONDUIT FITTING plastic coating wards off corrosion



Acids, alkalies, greases, and oils will not affect Plast-A-Coated Condulets which, when properly installed with plastic or plastic-coated conduit, will last many times longer than unprotected fittings. Black plastic coating also has good abrasion resistance. Photo shows Plast-A-Coat touch-up compound being used to cover exposed areas in threads to seal the installation against corrosives. Made by Crouse-Hinds Co., Syracuse 1, N. Y.

▲ For more details circle NED-628 J9 on enclosed inquiry slip ▲

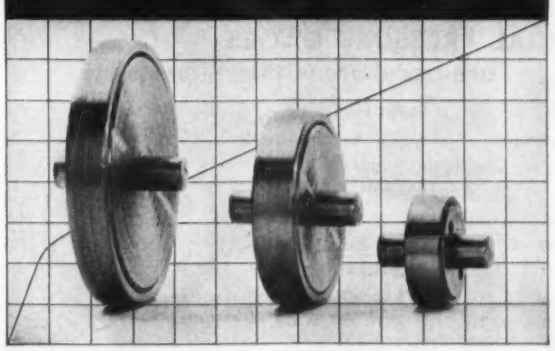
PUNCH PRESS in 8-ton floor or bench models



Added to the line, this Model BT-8 bench or floor type punch press has 8-ton capacity. It has die space with 7-in. shut height and 5-in. throat or optional 8½-in. shut height and 10-in. throat. It can be set up easily for blanking, forming, shearing, riveting, drawing, punching, or any other standard press operation. Single-pin knife-type clutch is readily changed from repeat to nonrepeat action. Standard stroke is 1½ in., with strokes from ¼ to 3 in. optional in ¼-in. increments. Bench model, complete with brake, motor mount, V-belt, and motor pulley, lists for $347.50. Made by Alva Allen Industries, 1001-15 N. Third St., Clinton, Mo.

▲ For more details circle NED-629 J9 on enclosed inquiry slip ▲

MINIATURE ROTARY POSITIONING CONTROLS



Inch Ounces to 65 Inch Lbs.—Precisely, positively held in an infinite number of positions. Clockwise or counter-clockwise rotation. No backlash. Low breakaway torques. Vibration proof. Applications include no-back, potentiometer positioner, dial control, clutch, coupling, etc. Patented principle. Diameters ¾" to 1¾". Depth ⅝". We'll gladly send literature.

REID CONTROLS
Reid Metal Products, Inc.
2021 N. Lincoln St., Burbank, Calif.

▲ For more details circle NED-630 J9 on enclosed inquiry slip ▲

FREE! to major users of industrial bags:

The mark of leadership

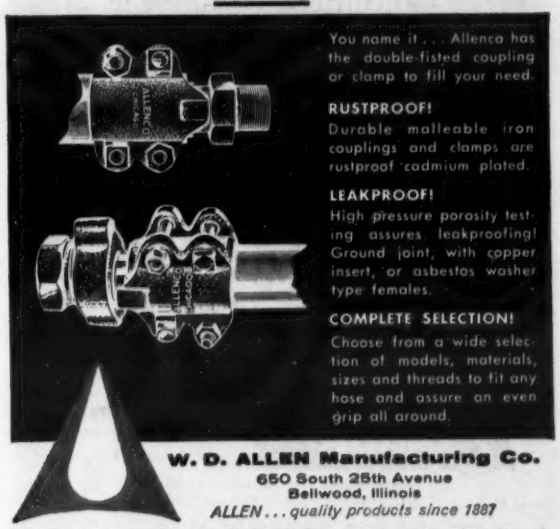
New product literature on the application of new heavy duty polyethylene bags in 5 separate industries

This highly transparent new 100% polyethylene bag features a specially developed Chipp-a-Weld seal . . . is moisture-proof, non-hygroscopic, lightweight, non-bulky, and easy to handle. It adapts readily to most existing packaging lines and has performed impressively in punishing endurance tests. Chippewa Plastics has developed entirely new techniques and equipment for quality-controlled mass production, including 4-color printing. Major bag users desiring further information are invited to write, specifying one of the following fields: ☐ Bulk Food ☐ Chemical ☐ Fertilizer ☐ Feeds ☐ Seeds.
Address inquiries to: *Industrial Bags, Dept. 302*

CHIPPEWA PLASTICS CO.
Division of Rexall Drug and Chemical Company
Chippewa Falls, Wisconsin

▲ For more details circle NED-631 J9 on enclosed inquiry slip ▲

there's an Allenco coupling and clamp for every job!



You name it . . . Allenco has the double-fisted coupling or clamp to fill your need.

RUSTPROOF!
Durable malleable iron couplings and clamps are rustproof cadmium plated.

LEAKPROOF!
High pressure porosity testing assures leakproofing! Ground joint, with copper insert, or asbestos washer type females.

COMPLETE SELECTION!
Choose from a wide selection of models, materials, sizes and threads to fit any hose and assure an even grip all around.

W. D. ALLEN Manufacturing Co.
650 South 25th Avenue
Bellwood, Illinois
ALLEN . . . quality products since 1887

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SAVINGS COME YOUR WAY with Clipper HOOKS and LACERS

Wear on hooks, belts and machinery is minimized by durable, smooth, flexible Clipper machine-laced joints. Save maintenance costs and cut unproductive downtime. Use Clipper hooks and lacers. For more information, send for Bulletin No. 157.

Clipper BELT LACER COMPANY
976 Front Ave., N. W., Grand Rapids, Michigan
Ask your Industrial Distributor for Clipper Products

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SILVER PLATING

"ON THE JOB" WITH POWDER

Cool-Amp Silver Plating Powder deposits a genuine coat of silver that will not peel off, and will provide lasting protection against oxidation. It has been used extensively and is accepted as equal to electroplating for bolted and stationary contacts.

Reduces Maintenance
Saves Electricity

Cool-Amp minimizes overheating and provides cool maximum conductivity for your copper, brass or bronze contacts. Used on all current carrying connections, Cool-Amp silver plating assures long life and low maintenance and will prevent series of losses from oxidation that are too small to create noticeable heat but still accumulate into major power loss. Apply to fuse clips and blades to reduce overheating.

Cool-Amp contains no cyanide and is simple to apply. It can be used by any number of people at the same time ON THE JOB in underground vaults, sub-stations and hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND SHIPPED PREPAID
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

The COOL-AMP Co.
Dept. ED. 8603 S.W. 17th Avenue, Portland 19, Oregon

▲ For more details circle NED-634 J9 on enclosed inquiry slip ▲

FREE LAYOUT SERVICE

...assures better storage facilities for less money

Take advantage of Equipto's Free Layout Service to obtain valuable advice on the number and type of storage units to buy ... complete floor plans and elevation drawings showing best way to arrange units within your allotted storage area. You will thus be able to make maximum use of your floor space, save steps, speed customer service, and simplify inventory and stock control.

If you would rather lay out your own facilities, send for fact-crammed, fully illustrated booklet, "How to Solve Your Storage Problems."

Both "assists" are further evidence of Equipto's primary concern with providing super-efficient storage facilities—not in merely selling equipment.

Equipto Division of Aurora Equipment Co.
690 Prairie Avenue, Aurora, Illinois
Steel Shelving - Slotted Angle - Bins - Drawer Units - Lockers - Benches

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Now Available!

Design data on built-in worm & gear sets for OEM applications

Machinery designers will welcome the complete and detailed engineering data contained in Catalog 201F covering Cleveland Worm and Gear Sets for built-in applications.

Standardized Cleveland components can be furnished in any design to meet your specialized requirements. Also, Cleveland maintains a continuing inventory of worm gear files from which tools can very often be selected to handle particular job requirements.

Write for your free copy today, and see how customized Cleveland Worm and Gear Sets can help you produce a better, more economical product.

THE CLEVELAND WORM & GEAR COMPANY
3283 East 80th Street, Cleveland 4, Ohio
A subsidiary of the Eaton Manufacturing Company

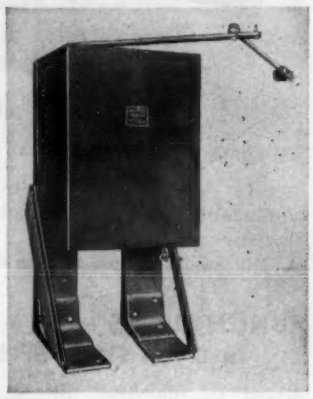
▲ For more details circle NED-636 J9 on enclosed inquiry slip ▲

TELEVISION CAMERA special lighting is not required

Weighing only 15 lb, this low - cost vidicon - type closed - circuit television camera will transmit an image on any channel from 2 through 6 to any standard receiver without special lighting. It is equipped with a turret mount to accommodate three different lenses, but will be sold with one, two, or three lenses, as required. It lists for $545. A matching 17-in. monitor is also available for $175. Made by Sylvania Electric Products Inc., 730 Third Ave., New York 17, N. Y.

▲ For more details circle NED-637 J9 on enclosed inquiry slip ▲

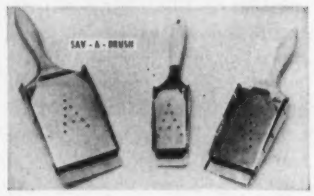
SWING GATE OPERATOR opens, closes, locks automatically



Robot Model SWG swinging gate operator uses a simple crank arm and connecting arm movement to open, close, and lock gates automatically at the touch of a switch. Gate starts to swing slowly, picks up speed in the middle of the cycle, then gradually slows to a stop. A safety friction clutch protects personnel or equipment that may come in contact with the moving gate. Quick disconnect permits manual operation. Ten standard control systems are offered, including a remote unit operated from a truck cab. Limit switches prevent over-travel. Standard 1/4 to 3/4-hp motors and operators handle gates from 8 to 24 ft wide. Larger operators can be specified. Made by **Robot Industries, Inc.**, 7041 Orchard, Dearborn, Mich.

▲ For more details circle NED-638 J9 on enclosed inquiry slip ▲

PAINT BRUSH SAVER retains brush shape and pliability



Life of a paint brush can be extended if stored in the Sav-A-Brush, an aluminum device that retains brush shape and pliability. Brush is placed in the container and dipped into cleaner, kerosine, turpentine, or strong detergent. Prices are 79 cents, 99 cents, and $1.09 for the 2, 3, and 4-in. sizes respectively. Larger sizes are available. Offered by **Commodity Sales Corp.**, 3440 Main St., Hartford, Conn.

▲ For more details circle NED-639 J9 on enclosed inquiry slip ▲

DIAL PRESSURE GAGES are accurate within 1/4 per cent

Made in standard pressure ranges and in compound and vacuum types, Mastertest gages include 4 1/2, 6, and 8-in. dial sizes. Adaptable for laboratory, industrial, and similar critical uses, gages are accurate within 1/4 per cent of entire scale. Read-easy dial has major markings on inner arc and fine graduations on outer arc. Three reading methods are optional. Twin-tip pointer has two tips, one below the other, to insure "dead on" reading. In second type, mirror dial reflects the pointer to give true reading when pointer and its reflection are aligned. The third error-free dial has a Plexiglas insert along the outer edge of the dial and over the fine graduations. This optically raises the graduations to assure correct reading, even when read at an angle. Made by **Marsh Instrument Co.**, 3501 W. Howard St., Skokie, Ill.

▲ For more details circle NED-640 J9 on enclosed inquiry slip ▲

Just Out! Just the ticket to cut cost!

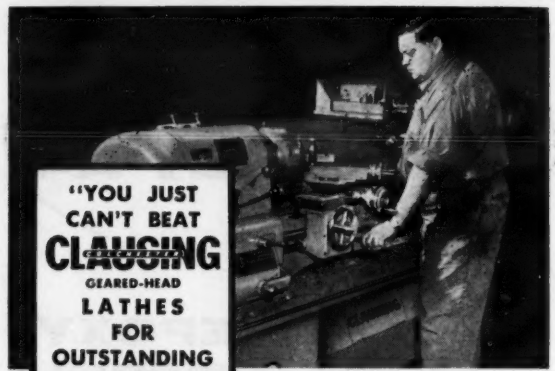
NEW SPEED CONTROL VALVE

1/8" and 1/4" pipe sizes in stock now!

Now a speed control valve that regulates your cylinder movement with precision and sureness, but which lists at $3.00 and $3.25. And despite its lower costs, "CUB" features the same high quality of design and workmanship you've come to expect from Ross. "CUB'S" design stresses trouble-free operation and easy maintenance. CUB is small, aluminum and lightweight. If you use speed controls, by all means call your Ross representative or write us.

Ross OPERATING VALVE CO.
161 E. Golden Gate Ave. • Detroit 3, Michigan

▲ For more details circle NED-641 J9 on enclosed inquiry slip ▲



"YOU JUST CAN'T BEAT CLAUSING GEARED-HEAD LATHES FOR OUTSTANDING VALUE"

HERE'S PROOF OF PERFORMANCE

"We like everything about our Clausing lathe. The spindle capacity 'beef' of the machine and ease of operation are impressive. The finish we get is phenomenal. And, you just can't beat Clausing-Colchester geared-head lathes for outstanding value!"

THE JARO MACHINE & TOOL COMPANY

Clausing geared-head lathes are bigger in capacity than other lathes in their class. Larger spindles, larger thru-hole, larger bearings for heavier work. 17" lathe spindle, for example, has 3 1/8" thru-hole. Have heavy-duty construction throughout with bed ways induction hardened. Gears in head and quick-change box run in bath of oil. Built for precision performance — to American standards of toolroom lathe accuracy. Have Gamet Micron tapered roller bearings with oil flow lubrication. Each is an outstanding value. 13" cabinet base models, for example, including motor and controls, start at $2302. Investigate before investing in *any* lathe.

Write for FREE LITERATURE

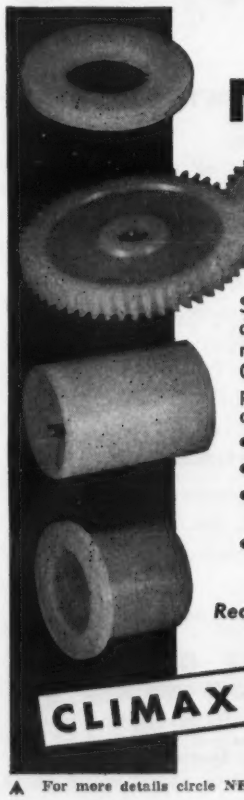
CLAUSING
CLAUSING DIVISION
ATLAS PRESS COMPANY
9-113 N. PITCHER ST., Kalamazoo, Mich.

▲ For more details circle NED-642 J9 on enclosed inquiry slip ▲

...from stock

NYLON

BEARINGS
GEARS
WASHERS



Save time...reduce initial engineering development outlay and subsequent manufacturing cost by ordering from Climax' broad stock. Climax nylon power transmission parts offer striking advantages... including:

- high strength!
- minimum lubrication needs!
- resistant to organic solvents, alkalies, dilute acids!
- many special sizes made without tool charge!

Request new prices... engineering data sheets!

CLIMAX METAL PRODUCTS CO.
863 EAST 140th STREET
CLEVELAND 10, OHIO

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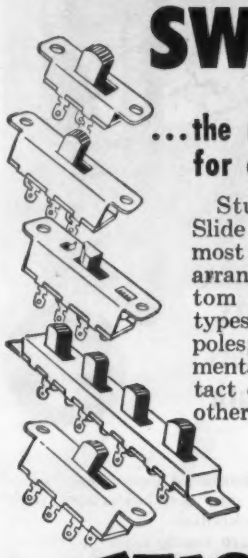
LOW-COST SWITCHES



...the most complete line for electrical products

Sturdy little Stackpole Slide Switches provide almost any desired switching arrangement — at rock bottom cost. U.L. approved types up to 3 amps., 1 to 3 poles; up to 4 positions; momentary or maintained contact designs . . . and many other features.

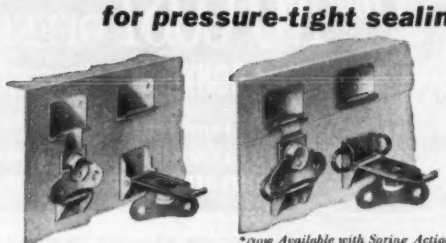
WRITE FOR SLIDE SWITCH BULLETIN RC-110

STACKPOLE

Electronic Components Division
STACKPOLE CARBON CO., *St. Marys, Pa.*

▲ For more details circle NED-644 J9 on enclosed inquiry slip ▲

Look to LINK-LOCK* for pressure-tight sealing



**Now Available with Spring Action for greater mounting flexibility and automatic take-up . . . where desired.*

Here's a positive-locking fastener you can use wherever preloaded closure is desired. Heavy pull-down pressure insures water-tight sealing when gaskets are used. Offered in three sizes, LINK-LOCK is compact, simple in design, economical. Open or closed, it always lies flat. Provides excellent impact and drop-test resistance, is trouble-free even at −70° F. A natural for instrument cases, storage boxes, etc. Write for samples and 40-page catalog.

SIMMONS FASTENERS
Quick-Lock · Spring-Lock · Roto-Lock · Link-Lock · Dual-Lock · Hinge-Lock

SIMMONS FASTENER CORPORATION
1793 North Broadway, Albany 1, N. Y.

▲ For more details circle NED-645 J9 on enclosed inquiry slip ▲

WRENCH SOCKETS
replaceable magnets hold screws

Magnetic replacement sockets for driving self-tapping screws are now equipped with removable and replaceable magnets so that good magnets in worn-out sockets can be re-used. Available sizes are 1/4, 5/16, 3/8, 7/16, 1/2, and 9/16 in. A special assembly tool quickly inserts magnets to the exact depth for proper magnetic contact with the screw head. Sockets are also available without the magnet. Made by **Snap-On Tools Corp.**, 8110 28th Ave., Kenosha, Wis.

▲ For more details circle NED-647 J9 on enclosed inquiry slip ▲

POPPET VALVE
energizes pilot air control valves

Pulse-Air poppet valve may be actuated by hand or a direct or remote mechanical means when used to actuate pilot operated air control valves. It releases a measured amount of air from the air control valve's pilot chamber, upsetting a static pressure balance which changes the directional flow. It opens and closes only when the plunger is compressed. It is offered with 1/8 and 1/4-in. ports for $8.75 and $15.95 each, respectively. Made by **Lithibar Co.**, Savage Engineering Div., 345 W. 14th St., Holland, Mich.

▲ For more details circle NED-648 J9 on enclosed inquiry slip ▲

SPEED REDUCERS
25:1 double reduction series made

Expanded line of Torque-Arm shaft-mounted speed reducers now includes a 25:1 double reduction series in eight sizes. Both 15:1 and 25:1 gear ratios are identical in size and price. Output speeds range from 12 to 400 rpm. Largest size TD11 has a 24.73:1 reduction ratio and is rated 154 hp at 75 rpm. Improved method of attaching the torque arm to the reducer case employs a saddle - type bracket for greater strength and better balance. Although 15:1 reducers are suitable for most applications, the new 25:1 units will give 40 per cent lower output speeds with identical motor speeds and V-drive ratios. Made by **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

▲ For more details circle NED-649 J9 on enclosed inquiry slip ▲

Replace window and canopy in minutes...
with New CESCO
FIBER GLASS HOOD FOUNDATION

CESCO has done it again! Thanks to a completely new hood foundation design, you can replace window and canopy in new CESCO Acid-Resistant Hoods with far less time and expense. Toggle locks on foundation sides permit window frame and molded rubber gasket to be removed in minutes. Fiberglass foundations are equipped with new Hed-Rite Headgear, adjustable three ways.

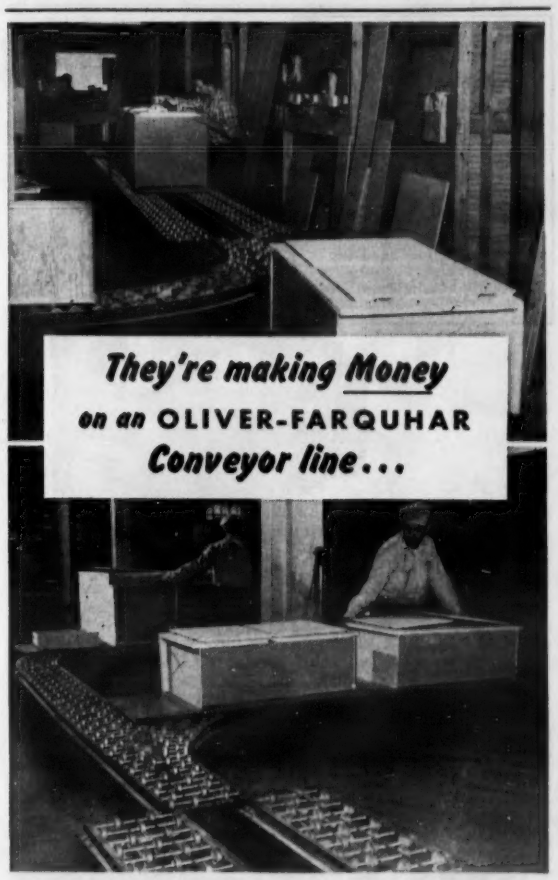
These CESCO safety equipment developments are available now with two new acid-resistant hood models—the Acitex Hood and the Neoprene Nylon Hood.

ACITEX HOOD - 732-A with air line; 731-A without line
NEOPRENE NYLON HOOD - 732-N with air line; 731-N without line

See your nearby CESCO distributor or write us direct for prices and complete information.

CESCO FOR SAFETY
CHICAGO EYE SHIELD COMPANY
2715 W. Roscoe St., Chicago 18, Illinois

▲ For more details circle NED-650 J9 on enclosed inquiry slip ▲



L-CO Cabinet Corporation, Shamokin, Pennsylvania, builds and finishes custom cabinets at a 500-a-day clip *right on* their Oliver-Farquhar Conveyor lines. This eliminates excessive handling, speeds production and provides necessary flexibility for a smooth, dependable work flow.

Lester Cohen, President of L-CO says: "We are in a competitive business . . . conveyors are a must with us." And it's his Oliver-Farquhar Power Belt and Gravity Conveyors that bring to his operations fast, low cost handling plus a production control that's practically automatic.

Whether you make cabinets, castings or chemicals, for instance, you can make more money by using Oliver-Farquhar Conveyors in your operations. Our experienced engineering staff will be glad to submit recommendations covering your needs. See your nearest O-F distributor or write, wire or phone our plant in York.

OLIVER POWER BELT AND GRAVITY CONVEYORS
Farquhar CONVEYORS

Send This Coupon

A. B. FARQUHAR DIVISION
The Oliver Corporation
Conveyor Dept. S-04, York, Penna.
Factory Branch: 618 W. Elm St., Chicago 10, Ill.
Please send me information on . . .
☐ "How to plan your own conveying system"
☐ Bulletin #536 on Model 536 Power Belt Conveyors
☐ Bulletin #801 on Gravity Conveyors

Name _____
Company Name _____
Address _____
City _____ State _____

▲ For more details circle NED-651 J9 on enclosed inquiry slip ▲

Write for Free Facts on . . . .

Brainard's NEW "POWER TEAM" FOR HEAVY-DUTY STRAPPING!

• Heavy duty strapping users get more cost-cutting advantages with Brainard's new PNB stretcher and PNB2 sealer.

The PNB pneumatic stretcher permits quick tensioning—and maintains it. The PNB2 sealer, with a simple press of the thumb, gives a strong, safe, lasting seal. Applied to 2" x .050 strap, they cut loading and packaging costs.

Write for free facts—or call your Brainard representative —he'll be there.

DIVISION OF SHARON STEEL CORPORATION • WARREN, OHIO

BRAINARD Safe-Ty **STRAPPING**

In Canada: Brainard Steel, Canadian Division, Toronto, Montreal

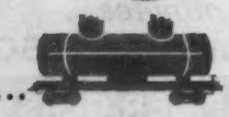
MAKERS OF TENSIONAL, HEAVY DUTY STRAPPING, SEALS, ACCESSORIES, TOOLS FOR CARLOADING AND PACKING

▲ For more details circle NED-646 J9 on enclosed inquiry slip ▲

Whether Your Liquid Measuring Problem Involves Gallons . . . .

or Barrels

or Tank Cars . . . .



THE Fluidometer SYSTEM

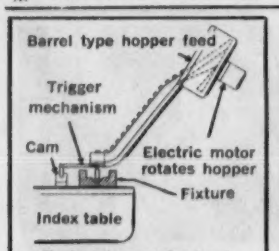
—with its exclusive automatic reset, gives accurate and completely automatic batching of either light or heavy liquids.

Available in either jacketed or unjacketed construction.

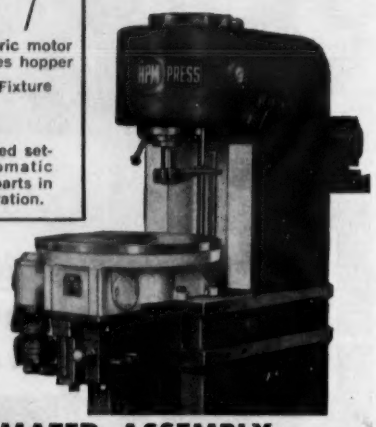
System shown above is 3" 15-200 G. P. M.—all jacketed.

HETHERINGTON & BERNER INC.
725 Kentucky Avenue • Indianapolis 7, Indiana
Write for Bulletin FI-56

▲ For more details circle NED-656 J9 on enclosed inquiry slip ▲



Typical hopper feed set-up for the automatic loading of small parts in an assembly operation.



AUTOMATED ASSEMBLY FOR LESS THAN $10,000.

▶ THE FORMULA: H-P-M C-Press, hydraulic index table and automatic part loading accessories. The 5-ton C-Press and index table unit offers unlimited possibilities for low cost automation when appropriately tooled. And it is not limited to single-job usefulness. Use its full potential for small part assembly, staking, crimping, forming, trimming and many other operations. 5, 10 and 15 ton models. Index tables for all C-Presses. Write for complete catalog information. H944

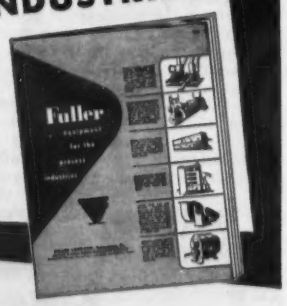
THE HYDRAULIC PRESS MFG. COMPANY
A Division of Koehring Company, Mount Gilead, Ohio, U.S.A.

▲ For more details circle NED-657 J9 on enclosed inquiry slip ▲

FREE BULLETIN

FULLER EQUIPMENT FOR THE PROCESS INDUSTRIES

12 pages of Photos Diagrams Charts



. . . tell you and show you how to move mountains of dry pulverized, crushed and granular materials to and from, up, over, around and under your plant to storage . . . and from storage to processing points . . . and do it economically.

It's called Fuller Equipment for the Process Industries. Just write for Bulletin G-3 . . . today. 1350 G211

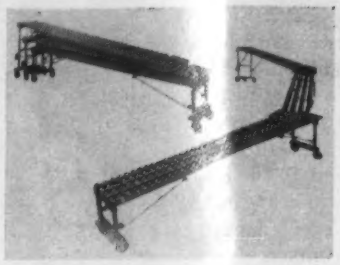
FULLER COMPANY
154 Bridge Street
Catasauqua, Pa.

Fuller

SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Birmingham • Chicago • Kansas City • Los Angeles • New York • San Francisco • Seattle

▲ For more details circle NED-658 J9 on enclosed inquiry slip ▲

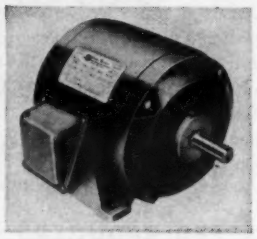
TELESCOPING CONVEYOR sections also pivot and swing



The three 18-in. wide sections of Model T-4P-18-310 Pivot Swing telescoping conveyor will not only extend from 11 ft 10 in. to 29 ft 6 in., but will also pivot and swing inside a truck or railroad car, or around roof supports and cases in a warehouse. Discharge end can service any point from straight to 90 degrees to either left or right. Each section is actually four paired A-F Live Rails with a pattern of 32 wheels per foot of length for 60-lb per foot loads. Pipe stand supports adjust to heights from 21 to 60 in. and have rubber-tired casters. High end has a floor lock. Unit handles 9-in. or longer packages. Made by **Alvey-Ferguson Co.**, 155 Disney St., Cincinnati 9, Ohio.

▲ For more details circle NED-659 J9 on enclosed inquiry slip ▲

ELECTRIC MOTORS ac types in 1 to 250-hp ratings



Protected open, weatherproof, totally-enclosed, corrosionproof, and explosionproof types are included in line of polyphase, ball bearing Duty Master alternating current motors in sizes from 1 to 250 hp. Designs include vertical and horizontal mounting arrangements with or without feet, or with NEMA C-face, D-flange, or P-base brackets. Low inertia, fast accelerating rotor is pressure cast and dynamically balanced. Other features are cast iron frame, Metermatic lubrication, ease of wiring, and protected design. Made by **Reliance Electric & Engineering Co.**, 24701 Euclid Ave., Cleveland 17, Ohio.

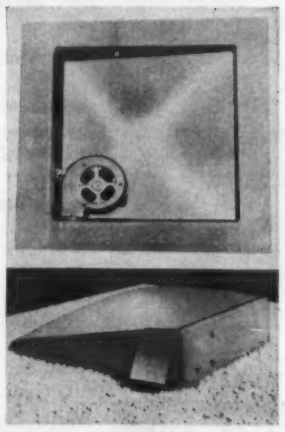
▲ For more details circle NED-660 J9 on enclosed inquiry slip ▲

TRANSPORTING COLD CHEST holds temperature 36 to 48 hr

Solidly frozen merchandise placed in the Freez/Safe portable cold transporter is kept for 36 to 48 hr with only a few degrees of temperature rise. Plastic foam insulation core of the 5-cu ft unit is molded of one piece and weighs only 12 lb. Top, bottom, and walls of insulator are 2½ in. thick. Unit will carry up to 175 lb of frozen items and is completely water, vermin, and rotproof. Outer case is either U. S. Royalite industrial plastic or No. 275 Test Fiberboard Case. Also available are 2½ and 2 cu ft models. Made by **Glo-Brite Foam Plastic Products**, Polyfoam Packers Div., 6415 N. California Ave., Chicago 45, Ill.

▲ For more details circle NED-661 J9 on enclosed inquiry slip ▲

VENTILATING SKYLIGHT easily installed without ductwork



Diffused, glarefree light as well as power ventilation are provided by this Consolite skylight. This leak and shatterproof unit is offered in choice of five colors and in self-flashing and curb mounted designs. A plastic grid with an extruded aluminum frame finishes off the ceiling opening. A 108-cfm squirrel-cage blower is driven by a 115-v 60-cycle motor. This 20 x 20-in. ventilating skylight is made of glass fiber reinforced plastic and is furnished complete, ready for installation. Made by **Consolidated General Products, Inc.**, 2401 Nicholson, Houston 8, Tex.

▲ For more details circle NED-662 J9 on enclosed inquiry slip ▲

TOWNSEND LOCKBOLTS now available in Stainless Steel for greater strength . . . corrosion resistance

If you need extra strength in fastening your assembly—plus corrosion resistance—you can get both now with Townsend 18-8 stainless steel lockbolts.

Townsend stainless lockbolts are vastly easier to install—for example, they eliminate the back breaking work of bucking stainless rivets which work-harden rapidly.

Write today for information to **Engineered Fasteners Division, P.O. Box 71-G, Ellwood City, Pennsylvania.**

Licensed under Huck patents RE 22,792; 2,114,493; 2,527,307; 2,531,048; 2,531,049 and 2,754,703

▲ For more details circle NED-663 J9 on enclosed inquiry slip ▲

this NO-COST TEST OFFER has CONVINCED thousands . . . send for YOUR FREE "TEST CAN" of C-5 "hi-temp" ANTI-SEIZE THREAD COMPOUND!

For use wherever threaded connections are subjected up to 1800° F. temperatures such as boiler, manhole, face plate studs, cylinder heads, and manifold studs or flange bolts on high temp steam lines and pumps.

Try C-5 and see why manufacturers, refiners and power producers have made it a part of their regular preventative maintenance program.

fel-pro C5 "HIGH-TEMP"

✓ Ends Seizing and Galling even up to 1800°F.
✓ Reduces Wrench Torque
✓ Ends Stud Breakage
✓ Permits Repeated Re-use
✓ Speeds Assembly and Disassembly
✓ Protects Stainless Steel at all Temperatures

1614BR

ANTI-SEIZE THREAD COMPOUND

C-5's exclusive colloidal copper formula separates mating metal threads and surfaces with cushioning, protective copper plating. C-5 prevents galvanic action and eliminates pitting even when dissimilar metals join. On mating metal surfaces, C-5 saves gaskets and countless man hours.

WRITE TODAY . . . For Your FREE Test Sample Can of C-5.

FELT PRODUCTS MFG. CO.
Dept. 68, P. O. Box 8609, Chicago 80, Ill.

▲ For more details circle NED-664 J9 on enclosed inquiry slip ▲

IF . . . you are introducing a new product
. . . you are redesigning a former model
. . . you are interested in saving production dollars

. . . WLS SHORT RUN STAMPING MAY BE OF HELP TO YOU

COMPLETE FACILITIES
• Blanking
• Forming
• Piercing
• Drawing
• Extruding
• Stenciling
• Countersinking
• Plating
• Machining
• Painting
• Grinding
• Welding

FREE
For those manufacturers who are faced with manufacturing problems, we offer a free bulletin illustrating many stampings we have produced, as well as a sample and cost summary of an actual part. We also offer free quotations from your blueprints at any time.

WLS Will Lead to Savings!
STAMPING COMPANY
Charter Member of Small Lot Stamping Institute
3287 E. 80th Street • Cleveland 4, Ohio

▲ For more details circle NED-665 J9 on enclosed inquiry slip ▲

Send for Bulletin #200

DURANT MANUFACTURING CO.
1922 N. Buffum St., Milwaukee 1, Wis.
22 Thurbers Ave., Providence 5, R.I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 Count Everything

▲ For more details circle NED-666 J9 on enclosed inquiry slip ▲

PURCHASING AGENTS' CHECK LIST FOR INDUSTRIAL SEATING

✓ COMFORT FEATURES TO MINIMIZE FATIGUE, BOOST PRODUCTION

Want to cut energy-robbing fatigue? Look for body-contoured backrest, large comfortable seat, spring steel backrest support that maintains correct firmness and fit for life of chair.

✓ ADJUSTMENT FEATURES FOR EFFICIENCY, VERSATILITY

Fit the chair to the job, and worker output rises! 4-Way adjustable back enables individual to move backrest up, down, backward, forward so it correctly supports small of back. Telescoping legs, adjustable at 1" increments, keep the worker at right height for the bench and job.

✓ CONSTRUCTION FEATURES FOR LONGER SERVICE, MINIMUM MAINTENANCE

Better-built chairs, require less repair, fewer replacements—give top value over the years. Look for welded tubular-steel frames, pre-shaped masonite seats, non-chipping oven-baked enamel finish—these are signs of good dollar value construction. Steel leg glides prevent gouged floors, no exposed bolts to cause worker injury.

YOU GET THEM ALL IN THE Royal® 515

...AMERICA'S TOP PRODUCTION CHAIR

SEND FOR FREE COMPLETE INDUSTRIAL SEATING CATALOG #7001

Shows dozens of specialized chairs and stools. Explains fatigue-free seating principles, helps choose the right chair for every job.

ROYAL METAL MANUFACTURING CO.
One Park Avenue, New York 16, Dept. 41-I.

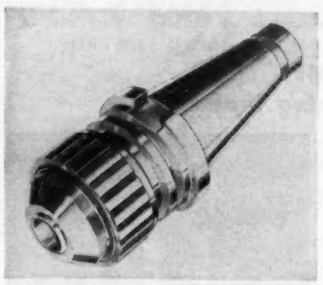
▲ For more details circle NED-667 J9 on enclosed inquiry slip ▲

GRINDING WHEEL variable density offsets wear

Uniform microinch finish readings are obtained on parts being ground as the Waltham Variable Density cylindrical grinding wheel wears down to its flanges. Variable density construction compensates for (1) the gradual reduction in surface feet per minute and (2) the gradual lessening of arc of contact between wheel and work as the wheel wears down. Grinding action is uniform throughout the life of the wheel. Wheel diameters range from 16 to 36 in. Made by **Waltham Grinding Wheel Co.**, Waltham 54, Mass.

▲ For more details circle NED-668 J9 on enclosed inquiry slip ▲

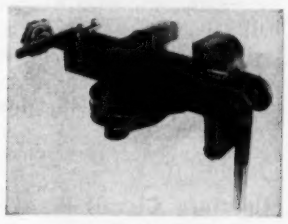
COLLET ADAPTER speeds up tool changes



Holding principle used successfully on Tree mills and milling heads is incorporated in the Rapid-Lok collet adapter to speed up tool changes on mills, jig borers, boring bars, and other machines. Cutters are held through mechanical leverage produced by internal balls and tapers, plus the lugs of the locking lever. Six styles accommodate 30, 40, and 50 National milling machine tapers; 9 and 10 Brown & Sharpe tapers; and the R-8 taper. Collet capacities are 1 and ¾ in. Made by **Tree Tool & Die Works**, 1600 Junction Ave., Racine, Wis.

▲ For more details circle NED-669 J9 on enclosed inquiry slip ▲

BENCH TYPE VISE of open-center construction



Quick-change device built into the Po-Ko-No open-center vise enables the user to set and maintain jaws at a predetermined position. Pieces of the same size are clamped and released from the jaws with the flick of a cam lever. With no obstruction beneath its jaws, the bench type vise handles jobs in a vertical or horizontal position. Three sizes are offered: 3-in. jaws with maximum jaw opening of 5 in.; 5-in. jaws opening to 9 in.; and 6-in. jaws opening to 10 in. Made by **Stroudsburg Engine Works, Inc.**, Stroudsburg, Pa.

▲ For more details circle NED-670 J9 on enclosed inquiry slip ▲

STOP FIRES FROM CARELESS SMOKING WITH SIPCO DUNKING STATIONS

Canister extends only 5½" from mounting surface.

Thousands of businesses, Industries and Institutions have discovered that SIPCO DUNKING STATIONS not only eliminate fire hazards from smoking, but also prevent litter, thus greatly reducing cleanup time.

Heavy duty cast aluminum canisters guaranteed 3 years against breakage. Over 20 different models. Standard and Jumbo sizes. Wall models, Floor models and permanent mounting models. Grey crinkle or bright polished models. With or without message signs and decals. Special colors, signs or decals on special order.

SIPCO DUNKING STATIONS are designed to be partly filled with water. "Smoker" dropped in the large top hole are OUT FOR GOOD—NO SMOULDERING—NO ODORS—NO UNSANITARY CONDITIONS. Lift off the canister or lift out an inner-liner, dump it and the cleaning job is done.

MODEL 4J: For permanent mounting on walls, posts, columns, etc., in public areas. Eliminates pilfering problem. Bright polished JUMBO canister furnished with glass-fiber innerliner.

MODEL 1JD: Jumbo size deluxe floor model. Heavy weighted base and eye catching sign. Height 38", Wt. 26 lb. Ideal for halls, aisles, landings, etc.

MODEL 5: New INEXPENSIVE open top model for mounting on machines, benches, etc., where it will be at the workers fingertips. Grey crinkle finished standard size canister without lid. Husky coil spring holds the "smoke". Ideal for plants with an on the job smoking program.

Model 1JD

Model 4J

Model 5

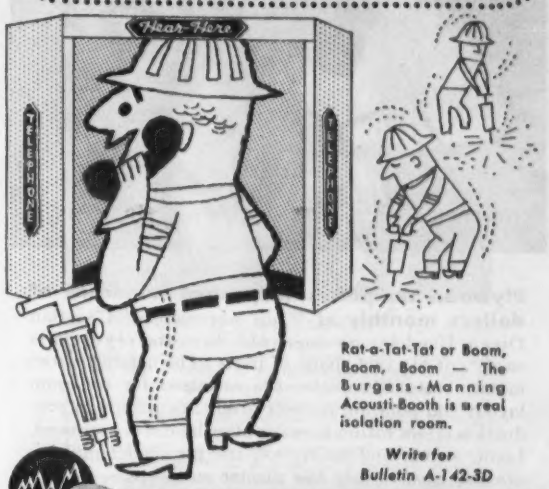
WRITE FOR ILLUSTRATED BROCHURES

STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. D • 3527 FARMINGTON RD. • PEORIA, ILLINOIS

▲ For more details circle NED-671 J9 on enclosed inquiry slip ▲

No, Boss — the boys are going strong — I'm talking from a —

BURGESS-MANNING ACOUSTI-BOOTH



Rat-a-Tat-Tat or Boom, Boom, Boom — The Burgess-Manning Acousti-Booth is a real isolation room.

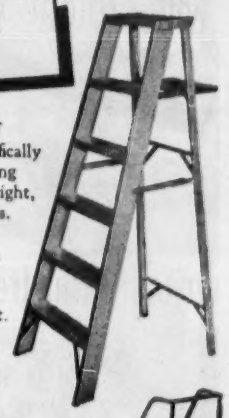
Write for Bulletin A-142-3D

Sound Engineering BURGESS-MANNING COMPANY Industrial Silencer Division
749 E. Park Avenue, Libertyville, Illinois
Dallas, Texas

▲ For more details circle NED-672 J9 on enclosed inquiry slip ▲

ladders for industry

• ALL-ALUMINUM
• ALL-STEEL
• FIBERGLASS

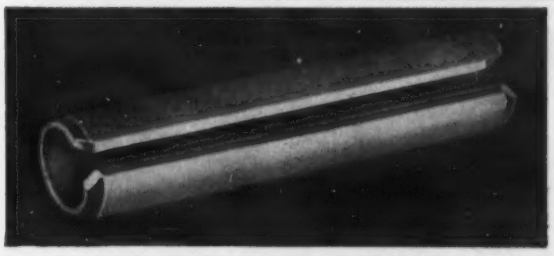


Choose from a complete line of Alco-Lite Ladders made specifically for industrial use. Easy handling aluminum step, warehouse, straight, extension, and specialty ladders. Mobile, 1 to 12 step all-steel ladder-stands. Non-conducting, non-absorbent fiberglass straight and extension ladders. Illustrated literature on request.

ALCO-LITE

Aluminum Ladder Co.
Dept. L6 W. Darlington St. Ext., Florence, South Carolina

▲ For more details circle NED-673 J9 on enclosed inquiry slip ▲



Versatile Rollpin®
simplifies design, speeds production

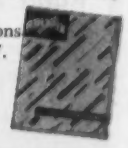
ROLLPIN can be used in place of taper pins, solid straight pins, set screws, hinge pins, dowels, clevis pins . . . and in some cases as a rivet.

ROLLPIN is a slotted, cylindrical spring pin deliberately oversized in relation to standard production drilled holes . . . compressive forces lock it in place. Reaming or secondary safety operations such as peening are eliminated.

ROLLPIN is easy to install, easy to drive out with a drift pin or punch, yet will "stay put" indefinitely.

ROLLPIN is available for immediate off-the-shelf delivery—comes in sizes from .062" diameter to .500" in carbon steel, corrosion resistant steel or beryllium copper.

For a free bulletin detailing Rollpin applications and installation methods, write to Dept. R54-937.



ROLLPIN®

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

▲ For more details circle NED-674 J9 on enclosed inquiry slip ▲

CUT COSTS with FIR PLYWOOD

Plywood templates help save hundreds of dollars monthly at Ryan Aeronautical Co., San Diego. Used for photographic layouts, plywood is easily cut to exact shape of parts to be obtained from metal sheets. Templates are arranged for optimum layout and polaroid camera prints are rushed to production crews within minutes after layout is approved. Light, strong and splitproof, the plywood templates are also used to help fair plaster mock-ups.

Only plywood with DFPA grade-trademarks is made and tested under industry-wide Douglas Fir Plywood Association quality control program. Look for letters DFPA on the panel.

DFPA TESTED QUALITY

Write for New File Folder Catalog

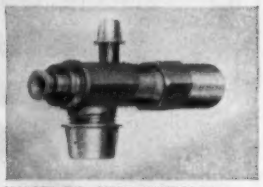
DOUGLAS FIR PLYWOOD ASSOC., DEPT. 181, TACOMA 2, WASH.

▲ For more details circle **NED-675 J9** on enclosed inquiry slip ▲

which CaPlug will protect your product best?

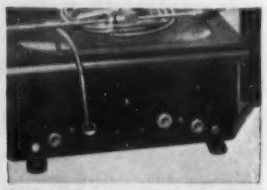
write for this free sample kit and see!

WANT TO SEAL OPENINGS IN A JIFFY?
Tapered (non-threaded) CaPlugs can be used as caps or plugs, inside and outside of threaded or plain fixtures. Just push them on . . . or push them in. Costing less to buy, these versatile closures cost less to apply. Time studies show that tapered CaPlugs save up to 500% in labor costs.



WANT TO KEEP FITTINGS UNDER WRAPS?
See how CaPlugs seal out dust and protect fittings of this refrigeration valve during shipment. Says Automatic Machine Products Sales Co., "CaPlugs are easy to install and afford the protection we desire." With ten standard styles stocked in over 500 sizes, CaPlugs are promptly available for nearly every closure need.

WANT TO PROTECT DELICATE THREADS?
Kiekhaefer Corp. guards the threads on the "Ride Guide" steering controls of its Mercury outboard motor with threaded style CaPlugs which the customer can reuse when storing motor. Made of tough, flexible Polyethylene, CaPlugs are kind to threads and polished surfaces — will not collapse, chip, break or shred.



WANT TO ADD SALES APPEAL?
Colorful CaPlugs spruce up your product and reflect the care you have taken to keep delicate systems free of dirt and moisture. This Bristol air control instrument is a good example. Says The Bristol Company, "They are sturdy enough so that they are not accidentally dislodged, but are still easily removable."

MAIL THIS COUPON FOR FREE CAPLUG SAMPLE KIT WITH DESCRIPTIVE LITERATURE AND PRICES

CAPLUGS DIVISION,
PROTECTIVE CLOSURES CO., INC.
2209 Elmwood Ave., Buffalo 23, N. Y.

RUSH a free CaPlug sample kit, literature and prices to us, without obligation.

NAME TITLE
FIRM
ADDRESS
CITY ZONE STATE

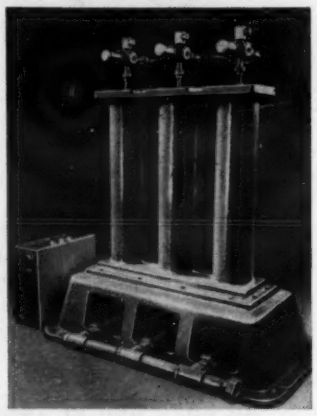
▲ For more details circle **NED-676 J9** on enclosed inquiry slip ▲

THREE-CIRCUIT LIMIT SWITCH for industrial control applications

Typical uses of this Loxswitch three-circuit limit switch are safety interlock systems which tie two or three functions together without use of relays and to control a motor and a timer or other control simultaneously. One model operates clockwise with two normally-open and one normally-closed circuits, and the other operates counterclockwise. Both switches can be reversed to give one normally-open and two normally-closed circuits. They have 70-degree safety overtravel, isolated circuits, silver contacts and are oil, water, and dust-tight. Made by **R. B. Denison Mfg. Co.**, 386 Broadway, Bedford, Ohio.

▲ For more details circle **NED-677 J9** on enclosed inquiry slip ▲

FREE-PISTON PUMP handles anything that flows



Actuated by compressed air, this free-piston pump will handle fluids ranging from molten metal or concrete to milk and pharmaceuticals. Nonpulsating, nonsurging flow is air-free, and fluid handled cannot be contaminated. Pump has three cylinders, one of which is discharging while one is filling and the other is filled and waiting. Chambers fill by gravity, and each has a nylon piston and two nylon ball valves. Operation is controlled by a separate control. One piston can be stopped for service while the other two continue to operate. A range of sizes is offered by **Crossley Machine Co.**, 301 Monmouth St., Trenton 9, N. J.

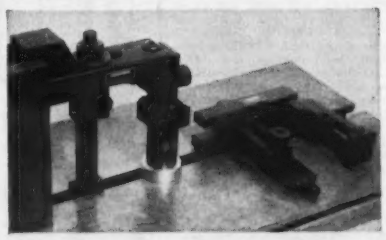
▲ For more details circle **NED-678 J9** on enclosed inquiry slip ▲

Miniature Circuit Breakers

Mechanical Products, Inc.—Fractional horsepower motors can be protected against overheating and burnout by three pushbutton reset breakers that can be mounted remote from the motor, or by an automatic recycling breaker attached to the motor surface which responds to current and temperature rise. These, and other motor and circuit protecting breakers are detailed in illustrated 38-page catalog.

▲ For more details circle **NED-679 J9** on enclosed inquiry slip ▲

COMPARE Hi-Lo CLAMPING WITH YOUR PRESENT METHOD



Buy This Hi-Lo STARTER SET for $55

Machine-Tool Clamping System

With the Hi-Lo Clamping System, you can save money, time and labor. This system leads to safe, rigid, parallel clamping on T-slot tables or bolster plates.

The Hi-Lo Starter Set makes one clamp for any toolroom or job-shop setup between ⅜ and 11". More important, it lets you compare the Hi-Lo System on the same jobs with your present methods. Bolt length and heel-block height are adjustable over the full range of the clamp.

Complete milling machine and boring machine sets are available or you can build up your system to meet your own clamping needs. Full allowance for Starter Set given when purchasing a larger set.

Write for literature and names of distributors.

Hi-Lo PRODUCTS COMPANY
Division of Steel City Testing Machines, Inc.
8819 Lyndon Ave. • Detroit 38, Mich.

▲ For more details circle **NED-680 J9** on enclosed inquiry slip ▲

Service men all across the country agree . . . there's no other screw driver or nut driver with the built-in comfort of the VACO "comfordome" handle. Makes service work easy! Enjoy the luxury grip of a VACO . . . the driver that gives plenty of power, yet is always kind to hands. Next time choose a VACO and *feel the difference!*

Manufactured and Unconditionally Guaranteed by
VACO PRODUCTS CO., 317 E. Ontario St., Chicago 11, Ill.
In Canada: VACO-LYNN PRODUCTS CO., LTD., Montreal 1, Que.

▲ For more details circle **NED-681 J9** on enclosed inquiry slip ▲

NEW! Portable Electric Bag Closing Machine

HERE is a handy little machine that makes bag closing fast, easy, and economical. It is recommended where operations are limited or intermittent and do not justify installation of large, high production machines.

LIGHTWEIGHT — 9½ pounds. Carry it anywhere. No installation; requires only an electrical outlet.
POWERFUL—Exclusive top and bottom feed for greater power and production. Direct drive motor with thumb control button.
VERSATILE — Closes bags made of cotton, burlap, jute, multiwall paper, laminated paper. Produces two-thread stitch Type 401, or can be furnished to produce single-thread chain stitch Type 101.
SAFE —Anyone can operate it. No special training required. Can be obtained with overhead suspension. Also, can be supplied with pedestal bracket.

Union Special® MACHINE COMPANY
Originator of Filled Bag Closing Machines
416 North Franklin Street Chicago 10, Illinois

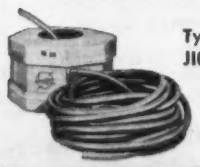
▲ For more details circle **NED-682 J9** on enclosed inquiry slip ▲

All the installation speed of Flexible Conduit, ...All the protection of Rigid Conduit...with LIQUATITE®

Extruded Polyvinyl Jacket Molded to Galvanized Flexible Conduit

Complete protection against any and all contamination—impervious to water, oils, chemicals, corrosive atmospheres. Installed in minutes. No more "down-time" due to wiring shorts or burnouts, no more periodic wiring replacements.

Write for free sample, costs and name of Distributor nearest you.



Type LT
JIC APPROVED

Type LA
UNDERWRITERS' APPROVED

ELECTRI-FLEX COMPANY
P. O. BOX 128-H • ROSELLE, ILLINOIS

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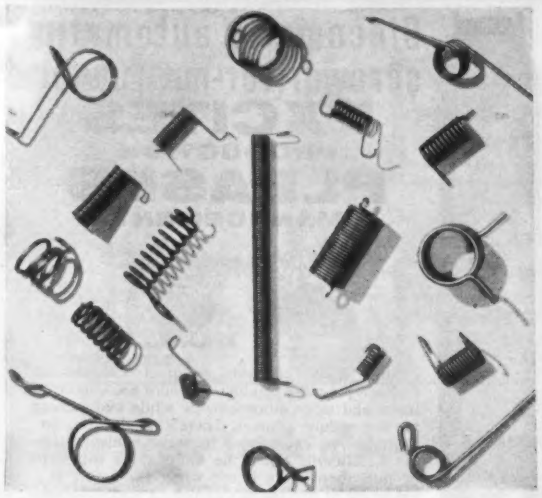

Torsion Springs

From a tiny hinge spring to a rugged auto starter spring, A.S.C. Divisions make countless varieties of torsion springs. Materials are round or flat wire wound spirally or on edge. Write for booklet "Spring Design and Selection—in brief."

Associated Spring Corporation
General Offices
Bristol, Connecticut

9822

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Kerotest has been producing highest quality valves for the past 50 years. Our new catalog gives dimensions, specifications and working tables to help you specify the right valves for your applications.

WRITE FOR YOUR COPY—Today!

KEROTEST

KEROTEST MANUFACTURING COMPANY
2522 Liberty Avenue, Pittsburgh 22, Pa.
In Canada, Kerotest products are manufactured and distributed exclusively by Guelph Engineering Company, Guelph, Ontario.

▲ For more details circle NED-685 J9 on enclosed inquiry slip ▲

Large and Small Dials
.0001" and .0005" Grads.

SERIES L
8 MODELS
2 STYLES

LONG RANGE

Up to four times the range you'd expect in a test indicator.

HIGH MAGNIFICATION

At least twice the magnification of other type test indicators. Many other features. Write for brochure and prices.

FEDERAL PRODUCTS CORPORATION
9179 Eddy Street, Providence 1, R. I.

Ask **FEDERAL** *First*
FOR RECOMMENDATIONS IN MODERN GAGES . . .
Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting, or Automation Gaging

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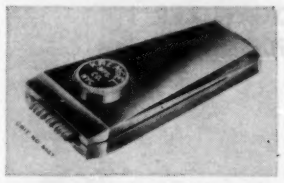
BARREL FINISHER uses vibrating-rotating action

Improvements in the Vibraslide 5 vibrating-rotating finishing machine include a 5-cu ft capacity and increased vibratory action to 2300 cycles per minute. Mechanical vibration is combined with normal rotation to assure thorough cleaning, deburring, or finishing of parts, even with inside diameters and recesses. Increased stock removal is reported by the action. In a test, complete burr removal and corner break was effected in ½ hr on retaining rings, and scale removal and coloring in another ½ hr. Machine is driven by a 3-hp motor. Made by **B. W. Elliott Mfg. Co.**, Prospect Avenue, Binghamton, N. Y.

▲ For more details circle NED-687 J9 on enclosed inquiry slip ▲

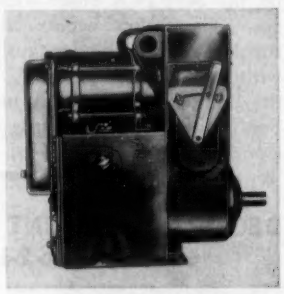
HAND MARKING TYPE HOLDERS permit quick changing of letters



Sharp, permanent markings can be made with these Bakelite type holders which hold aligned, engraved, deep-cut Vinylite letters and numbers. Legends can be quickly interchanged. Holders also include an adjustment button and slots for type faces and numbers in lengths from ½ to 5 in. Made by **Krengel Mfg. Co.**, 227 Fulton St., New York 7, N. Y.

▲ For more details circle NED-688 J9 on enclosed inquiry slip ▲

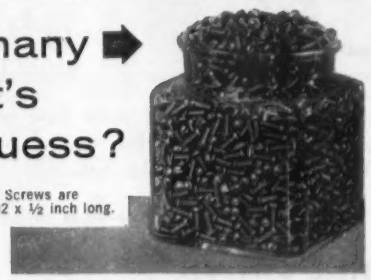
VARIABLE SPEED TRANSMISSION affords 0-350 rpm speeds



Infinitely variable speed from 0 to 350 rpm in either direction is afforded by this 1½-hp hydraulic transmission with motor. Identical forward and reverse speeds can be set as desired. Unit is suited to heavy-duty application in machine tool drives, conveyors, tappers and reamers, printing presses, pumps, blowers, or wherever variable speed and instant reversing would increase efficiency. Self-contained package unit has 6-qt oil reservoir, 1-in. diameter output shaft, and either single or three-phase 60-cycle motor. Features include a neutral position and an integral torque multiplier for high torque applications. Made by **Roberts Mfg. Co.**, 849 W. Grand Ave., Chicago 22, Ill.

▲ For more details circle NED-689 J9 on enclosed inquiry slip ▲

How many ➡ ...what's your guess?



Screws are #8-32 x ½ inch long.

The new DPS Model U screwdriving machine.

One man can drive them in one hour with a **DPS power screwdriving machine**

Why sacrifice manpower on so simple yet tedious a job as driving screws? Free skilled hands for more productive work . . . with a DPS power screwdriving machine.

One man can drive the 2,400 screws in the jar above in one hour . . . by simply pressing an air-operated foot pedal. Equally important, an easily adjustable clutch holds constant driving torques.

NEW! THE MODEL "U" — quickly adaptable for fast, clean driving of screws, nuts and studs. New folder contains full data. Write for your copy today. 15,048A

DETROIT POWER SCREWDRIVER COMPANY
2819 W. Fort St. • Detroit 16, Michigan
A Subsidiary of Link-Belt Company

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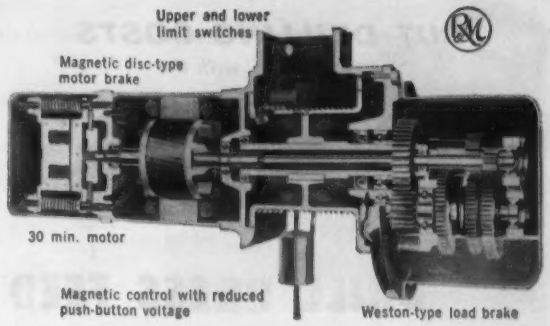

new low-cost hoist

CAPACITIES: ¼, ½, 1, and 2 tons—New Type J wire rope hoists, in three frame sizes, give you important industrial quality features at no extra cost. R&M high torque hoist motor has highest time rating of any in the low price hoist field—30 min., 55° C. Magnetic disc type motor brake. Weston-type load brake, jam-proof upper and lower limit switches—all contribute to long, virtually trouble-free life. Tough aluminum alloy frame. Full magnetic push-button control with reduced push-button voltage. Plain, geared, or motorized trolleys available. Request Bulletin 905 today. **Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio.**

take it up with
ROBBINS & MYERS
hoists / cranes

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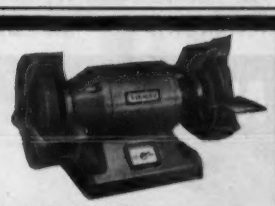
NEW — Heavy-duty grinders with unique extended frame design



Permits more space for grinding odd-shaped parts and tools from many angles. And only with Stanley do you get such a complete line of grinders—the *right* one for any application!

No.	HP	Speed (no load)	Cycles	Wheel Dia.	List Price
635	¼	3450	60	6"	$60.00
636	⅓	3450	60	6"	80.00
697	⅓	1725	60	7"	139.00
		1425	50		
637	½	3450	60	7"	120.00
		2850	50		
638	¾	3450	60	8"	165.00
		2850	50		
640	1	1725	60	10"	250.00
		1425	50		

115/230V, Single-phase, AC; 208-220/440 V, 3-phase, AC; No. 635 115V, single-phase, AC only.

Brand new Pedestal, too—$50. No. 626, heavy welded steel. Water pot, tray and storage cabinet with shelves.

For full details on grinders and pedestal, write: Stanley Electric Tools, Div. of The Stanley Works, 589 Myrtle St., New Britain, Conn.

STANLEY

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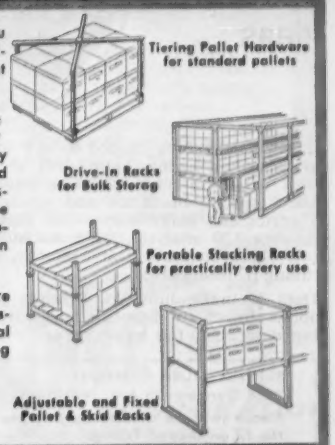
Wait a minute! adding to your warehouse?

Has it ever occurred to you that you may have sufficient space—if you can put it to proper use?

Let **PALTIER** trained Materials Handling Engineer take a look. With properly selected equipment and flow of materials your present storage area may be adequate! Storage equipment **COSTS LESS** than **NEW FLOOR SPACE!**

PALTIER STORAGE SYSTEMS are designed jointly by industrial architects, structural and materials handling engineers.

Write today to . . .



THE PALTIER CORPORATION
1705 Kentucky Street • Michigan City, Indiana
DISTRIBUTORS IN PRINCIPAL CITIES

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CUT DRILLING COSTS with the Bellows

DRILL PRESS FEED

Attaches to the star wheel shaft of any drill press. A touch on the handle sends the drill rapidly to the work, hydraulically feeds through the work, automatically returns to start position. Air-powered, electrically controlled. Feed adjustable to meet needs of any tool working in any material. Install it in half an hour; it will pay for itself in half a month.

Detailed specs in 16 page Bulletin

Tells how you can cut cost in all kinds of drill press operations with this versatile feed unit. Write Dept. NED959, The Bellows Co., Akron 9, Ohio. In Canada—Bellows Pneumatic Devices of Canada, Ltd., Toronto 18. Ask for Bulletin DF-110R.

1010-B

The Bellows Co.
AKRON 9, OHIO

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SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

Dozens of Uses in Plant Production and Maintenance

New SKIL Model 823 Impact Wrench sets nuts from 3/8" to 1 1/4" at 2000 impacts per minute. Collet chuck quickly adapts it for drilling in metal or wood. Or use it as a screw driver, to tap holes, to drive a hole saw or as a wire brush. Contour-grip handle allows one-hand operation. Will not twist in the hand under torque. Tool cannot reverse while running. Invite your SKIL distributor to prove the many ways you can use this new Model 823 SKIL Impact Wrench.

Model 824 Impact Wrench Kit. Contains Model 823 above and these accessories: 1 Universal Joint; 1—8" Extension Bar; 6 Hexagon Sockets from 1/2" to 13/16" plus sturdy steel case.

Made only by SKIL Corporation, manufacturer of famous SKIL and SKILSAW products. 5033 Elston Avenue, Chicago 30, Illinois. In Canada 3601 Dundas Street West, Toronto 9, Ontario

SKIL

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Tubexperience in Action

Tubing Shaped to New Ideas

If you need tubing shaped to new ideas or for such purposes as Bourdon springs, gun drill shanks, radar screens, aircraft structural parts, electrical equipment, and are troubled about special machines and special setups, stop worrying! Superior can make almost any shape, to your specifications, in over 120 analyses. Save machining and drilling bar and rod—save headaches, save money, by ordering your shaped tubing from Superior.

Data Memorandum No. 17 gives you complete information about shaped tubing—tolerances, sizes, lengths, alloys, ordering data. Use the handy coupon to obtain your free copy.

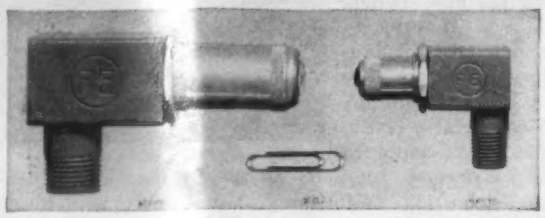
SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.
Please send me at once my free copy of Data Memorandum No. 17 on Shaped Tubing.

Name_____ Title_____
Company_____
Street_____
City_____ Zone____ State____

▲ For more details circle NED-696 J9 on enclosed inquiry slip ▲

PHOTOELECTRIC SCANNER
features focusing light source

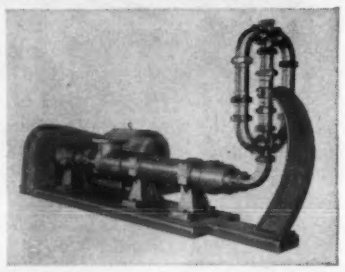
Focusing light source incorporated in this photoelectric scanning system provides a sharply defined light spot, at any distance from 12 ft to 5 in. Range of previ-



ously available smaller light source was 1 to 48 in. The new Model LS-2 light source is contained in cast-aluminum housing. Focusing system extends beyond the housing 1 13/16 to 2 1/8 in., depending on focus. The 6.3-v G-E No. 82 lamp operates on 4.8 v ac. Unit can also be mounted in a 1-in. hole in a 1/8-in. panel by means of hex nut at base of focusing tube. Made by **Farmer Electric Products Co.**, 2300 Washington St., Newton Lower Falls, Mass.

▲ For more details circle NED-697 J9 on enclosed inquiry slip ▲

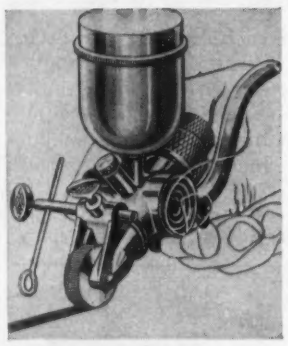
ULTRASONIC HOMOGENIZER
30-hp unit uses 9000 gph head



Using 9000-gph ultrasonic heads (mechanical transducers), the Hydrasonic ultrasonic homogenizer can be used for paper coatings, defibering, and other large scale, high-volume operations. Power input is 30 hp, 220/440 v, 60 cycles. Liquids to be emulsified impinge in the form of a flat, high-pressure jet stream on the edge of a blade which vibrates at about 22,000 cps. Cavitation occurs continuously in the stream rushing past the blade, causing violent pressure changes within the resonant bell. These are put to work in the liquids with virtually no loss of energy. Made by **Sonic Engineering Corp.**, 146 Selleck St., Stamford, Conn.

▲ For more details circle NED-698 J9 on enclosed inquiry slip ▲

DECORATIVE PAINT STRIPER
makes 1/32 to 2-in. stripe widths



Clean, straight lines, accurate parallel striping, and curved lines are easily made with the Type W paint striper. Various enamelled, painted, or lacquered decorative effects can be created on equipment, furniture, trucks, and other objects. Held like a fountain pen, the tool makes stripes in widths from 1/32 to 2 in. with interchangeable wheels. It incorporates an adjustable line gage and paint flow regulator. Beveled and V-shaped wheels for striping grooves are offered. Made by **Wendell Mfg. Co.**, 4234 N. Lincoln Ave., Chicago 18, Ill.

▲ For more details circle NED-699 J9 on enclosed inquiry slip ▲

TIME SWITCH
for 1 to 24 on-off operations daily

Operation of the No. 4100 Hourmaster time switch may be set for 1 to 24 "on-off" operations per day. Hours of "on" operation are scheduled on the center 24-hr dial, and an "off" trip on the outside 60-min dial controls the length of operation in 1-min steps from a minimum of 2 min to a maximum of 55 min. It has a 30-amp or 1-hp load rating. Single and double-pole models are available in standard, dust-tight, rain-tight, and submersible enclosures. Skip-A-Day wheel is an option. Made by **Tork Time Controls, Inc.**, Mt. Vernon, N. Y.

▲ For more details circle NED-700 J9 on enclosed inquiry slip ▲

Clecomatic automatic screwdriver-nut runner EXCITES PRODUCTION PLEASES MANAGEMENT

Feather light and midnight quiet, Clecomatic* makes s-p-e-e-d-y production a sure bet. Clecomatic starts and stops automatically while maintaining positive torque control. There's no throttle, no stalling! An exclusive Cleco mechanism starts the Clecomatic when the bit engages the screw or nut, then shuts it off when the screw is tightened to precise, preset torque specifications.

The Clecomatic air motor operates only during actual rundown. Less air is required per job. Tool wear is greatly reduced. Clecomatic has earned management's enthusiastic approval because no other air tool offers such outstanding economy and efficiency.

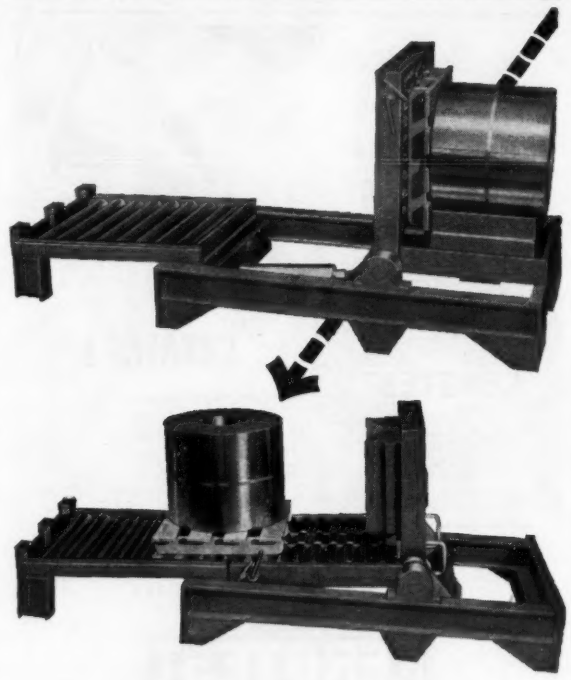
*Trademark

WRITE today for descriptive literature on Clecomatic—the one of a kind automatic screwdriver-nut runner.

Division of REED ROLLER BIT COMPANY P. O. Box 2119 • Houston 1, Texas, U.S.A. • In Canada: Cleco Pneumatic Tool Company of Canada, Ltd., 927 Millwood Road, Leaside (Toronto), Ontario

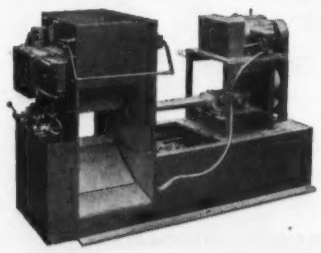
CLECO AIR TOOLS

▲ For more details circle NED-701 J9 on enclosed inquiry slip ▲



Coil tilting made easy with these portable self-contained tilters

Coils of steel, tinplate, brass, aluminum and other metals are easily tilted from horizontal to upright or upright to horizontal position with the Salem-Brosius line of portable coil tilters. Completely self-contained, they are hydraulically actuated from a single electric motor power source. They can be moved from one position to another in the plant by crane and will tilt coils weighing up to 50,000 lb, centering them on pallets up to 66 in. square.

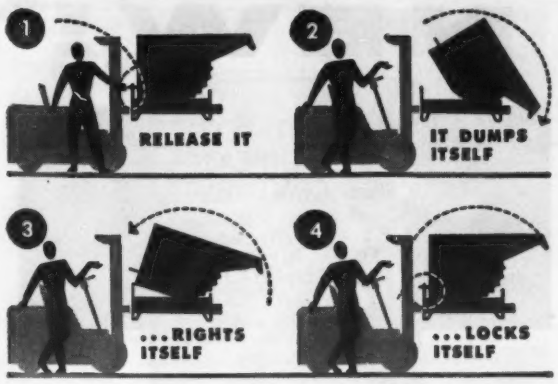


Slitting mill edge-trim and scrap wire are tightly balled and automatically ejected from this Salem-Brosius scrap baller.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.

In Canada: Salem Engineering Limited • 1525 Bloor St. W. Toronto 9, Ontario

▲ For more details circle NED-702 J9 on enclosed inquiry slip ▲



Makes every truck a dump truck

It's a self-dumping hopper for fast, efficient handling of wet or dry, hot or cold bulk materials such as scrap metal, cinders, cullet, hot forgings and castings, punch press parts. Pickup is swift and simple. Forks or platform of any standard lift truck slide easily into hopper underframe. Operator picks up loaded hopper . . . transports it to destination . . . flips the latch . . . and the Roura does the rest . . . automatically. Easily cuts costs 50%. Made of ¼" steel plate with continuous arc-welded seams. Also available in stainless steel or galvanized. Five sizes, ½ to 2 cubic yards. Standard models available for immediate shipment. Write for literature. ROURA IRON WORKS, INC. 1415 Woodland Ave., Detroit 11, Mich.

ROURA Self-Dumping HOPPER

▲ For more details circle NED-703 J9 on enclosed inquiry slip ▲

CHEM-WEAR®

Permanently FLAMEPROOFED Work Clothes Protect from Fire Hazards

CHEM-WEAR Flameproofed work clothes protect workers from the hazards of welding, test cell work, light metal splashes.

Look to CHEM-WEAR, your best source for all types of acid-resistant clothes and a complete line of cotton work clothes.

Special Work Clothes for Handling Liquid Oxygen

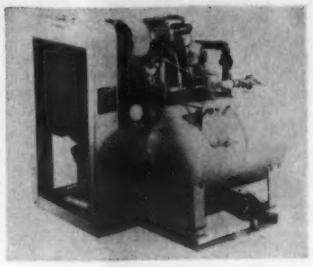
Write for Catalog

Available from Your Safety Dealer or Write to

M. SETLOW & SON, Inc.
Quality Since 1896
131 CHESTNUT ST., NEW HAVEN, CONN.

▲ For more details circle NED-704 J9 on enclosed inquiry slip ▲

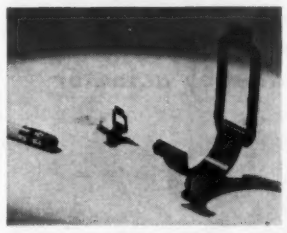
AIR COMPRESSOR powered by Jeep gasoline engine



Capable of operating two air tools and inflating tires simultaneously, the GS260 air compressor can pump up tires from 0 to 130 psi in 17 sec. A Willys Jeep industrial engine is converted to use two cylinders for power and two cylinders to compress air. Engine develops 30 hp and the tank has an 85 cu ft displacement. It can be truck mounted, or used as a mobile or stationary unit. Made by General Supply Co., 1920 McGee Trafficway, Kansas City, Mo.

▲ For more details circle NED-706 J9 on enclosed inquiry slip ▲

INSULATED WIRE CLIPS hold 5/32 to ¼ in. diameters



Wire groups in electrical harnesses or other wire and cable installations can be secured or separated with miniature Insuloid Cradleclips. Small pressure tubing and electrical components such as capacitors, resistors, and transistors can also be fastened with the clip. An extensible neoprene clip stretches and locks across the U-shaped nylon cradle into which a bundle of wires or a component fits. Diameters from 5/32 to ¼ in. can be accommodated in miniature clip units. Complete line takes diameters up to 2¼ in. Made by Electrovert, Inc., 124 E. 40th St., New York, N. Y.

▲ For more details circle NED-707 J9 on enclosed inquiry slip ▲

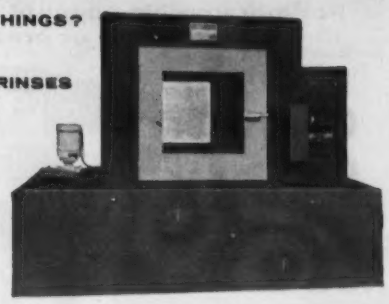
MINIATURE DELAY RELAY in ranges from 0.030 sec to 2 min

Military and aircraft specifications are met by this miniature, hermetically sealed time delay relay offered in three timing ranges covering 0.030 sec to 2 min. Repeat accuracy is 5 per cent. Units can be supplied for delay on energizing or de-energizing, and coils in a range of voltages are available for alternating or direct-current circuits. Double-pole, double-throw, single-break contacts are standard with octal-plug, solder lug, or AN connector terminals. Relay is unaffected by voltage variations and is instantaneously recycling. It measures 4⅝ x 1 13/16 x 1½ in. Made by Elastic Stop Nut Corp. of America, A'G'A Div., 1027 Newark Ave., Elizabeth 3, N. J.

▲ For more details circle NED-708 J9 on enclosed inquiry slip ▲

BLOCKS? BUSHINGS? BOLTS?

CLEANS AND RINSES 'EM ALL!



NEW PENNSALT AUTOMATIC SPRAY WASHER

Pennsalt's new Spray Washer effectively removes metal filings, shop soil, oil and grease . . . both from large units and small, basket-loaded parts . . . washes, then automatically rinses in fast, self-timed cycle.

- Synchronous timer can be preset to vary wash-rinse cycle.
- 98-nozzle jet spray network insures fast, thorough washing and rinsing.
- Cleans large parts up to 3' x 3'.
- Opening and closing door starts and stops processing cycle.
- Can be steam, gas, or electric heated.

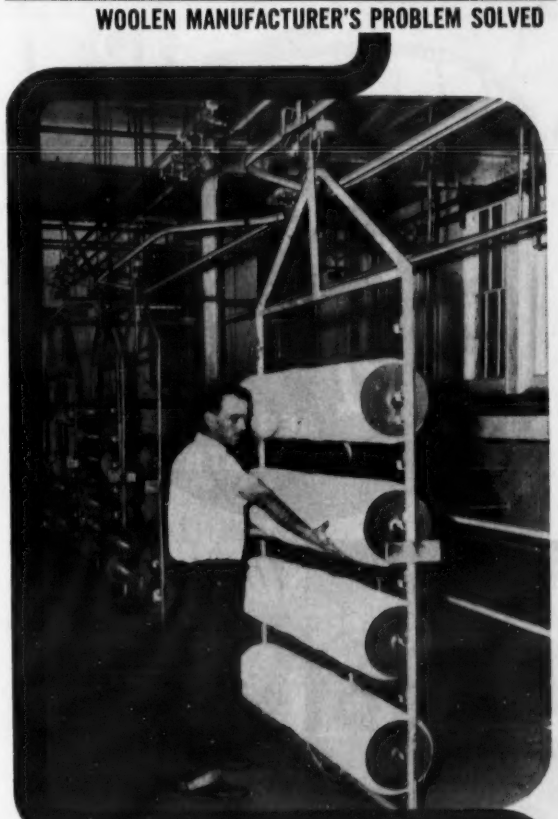
A BETTER START FOR YOUR FINISH®

Pennsalt Chemicals® ESTABLISHED 1850

For More Information Write:
Metal Processing Dept. 226
PENNSALT CHEMICALS CORPORATION
East: 3 Penn Center, Philadelphia 2, Pa.
West: 2700 S. Eastern Ave., Los Angeles 22, Calif.

▲ For more details circle NED-709 J9 on enclosed inquiry slip ▲

WOOLEN MANUFACTURER'S PROBLEM SOLVED



POWER AND FREE CONVEYOR SYSTEM

- Eliminates manual handling and reduces manpower requirements.
- Moves 160-lb. spools of yarn through a 2-story processing cycle.
- Automatically dispatches carriers to several operating stations.
- Automatically stores in-process goods by grade and color on gravity lines.
- Returns empty carriers to one of 13 loading stations.

In this system, power is provided by a regular overhead Chainveyor system. Pusher dogs, mounted directly to the chain serve as the motivating force, automatically moving the loads attached to the free carriers. Free carriers move in storage or free track alongside the power track. Switches automatically shunt carriers off and onto powered lines as desired. Carriers then can travel by gravity or may be hand-pushed on storage or free track.

For further information about Chainveyor power and free systems, engineered for economical automatic materials handling write:

QUALITY OVERHEAD CONVEYOR SYSTEMS

CHAINVEYOR® CORPORATION

Engineers & Manufacturers
DISTRIBUTORS IN ALL PRINCIPAL CITIES
DISTRICT SALES OFFICES • CHICAGO, DETROIT, JACKSONVILLE, NEWARK, NEW ORLEANS
MAIN OFFICES • 5618 East Washington Blvd. Los Angeles, California

▲ For more details circle NED-710 J9 on enclosed inquiry slip ▲

Need a Motoreducer with an unusual drive motor?

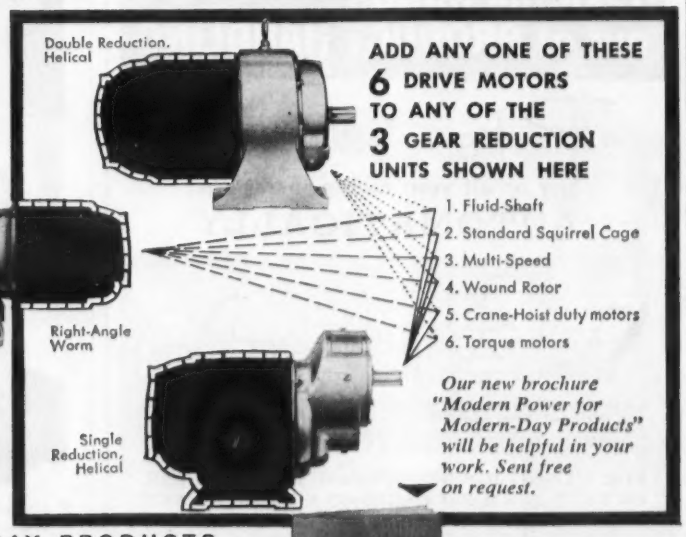
LET REULAND TAILOR A MOTOREDUCER PACKAGE TO YOUR EXACT NEEDS . . .

No longer must you "make something do"... no longer must you modify *your* machine to fit the *drive!* Hundreds of different speed and power variations can be developed from the three basic Reuland gear reduction units shown at right.

This is made possible through the use of Reuland's famous "Xpandable-Design" idea.

Whether you need a simple motor-and-reducer—or an amazing, automatic combination with a special motor, gear reducer, magnetic brake and fluid coupling—Reuland engineers can quickly solve your drive problem.

Costs are lowered. Development time is saved. Your drive is *right*. Why not see first-hand what a Reuland Motoreducer can do for you.



ADD ANY ONE OF THESE 6 DRIVE MOTORS TO ANY OF THE 3 GEAR REDUCTION UNITS SHOWN HERE

1. Fluid-Shaft
2. Standard Squirrel Cage
3. Multi-Speed
4. Wound Rotor
5. Crane-Hoist duty motors
6. Torque motors

Our new brochure "Modern Power for Modern-Day Products" will be helpful in your work. Sent free on request.

MODERN POWER FOR MODERN-DAY PRODUCTS . . . ALL IN LIGHTWEIGHT ALUMINUM FRAMES!

REULAND MOTORS®

A DEMONSTRATION UNIT FOR YOUR EQUIPMENT?
So sure are we you'll like what you see, we're offering to engineer a demonstration unit for your equipment without the slightest obligation. Just write us.

Reuland Electric Company—Distributors in all principal cities
Western Division: Alhambra, California • Eastern Division: Howell, Michigan

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For more precise control of temperature or pressure...

Pneumatic
Controller Positioner Valve

NOW IN ONE UNIT

This new field-proved FultroMatic provides control efficiency features never before possible in one unit—at a saving up to one-half the cost of 2- and 3-unit systems!

- ★ Improved Accuracy
- ★ Positive Positioning
- ★ Field Reversible
- ★ Faster Response
- ★ Adjustable Proportional Band
- ★ Simplified Settings

Full Story NOW in Bulletin RY-755

Robertshaw-Fulton CONTROLS COMPANY — FULTON SYLPHON DIVISION, Knoxville 1, Tenn.

▲ For more details circle NED-711 J9 on enclosed inquiry slip ▲

HAND TRUCK ATTACHMENT
third wheel takes load off operator

Addition of a load transfer wheel to the Shop Caddy hydraulic lift hand truck makes it possible to move the load with minimum effort. By lifting the load with the four-speed hydraulic pump to the correct height indicated on the side frame, the truck automatically rests on the third wheel attachment. Operator merely pushes without holding up the load. Truck lifts, moves, and lowers up to 1/4-ton loads and is offered with 36 or 54-in. lifts. Load wheel can be attached to all Shop Caddies now in use. Made by **Grand Specialties Co.**, 3101 W. Grand Ave., Chicago 22, Ill.

▲ For more details circle NED-713 J9 on enclosed inquiry slip ▲

VACUUM CLEANERS
three models run on compressed air with suction created by actuator

Vibro-Pneumatic industrial vacuum cleaner operates on an 80-psi and up air supply, using only 12 cfm at 93 psi if held open continuously. In normal use nozzles are in contact with the surface and air consumed only one-quarter of the time. Air at 93 psi provides 7800 blasts per minute. Three models are offered: Pick-a-Back which feeds into a nylon dust receiving bag carried on the user's back; canister tank model that cleans and washes suction air before exhausting it; and a recovery model, similar to the canister model, but with a dry recovery feature for reclaiming collected material for reuse.

Actuator can be converted from one size wand to another. Wands are offered in 2, 5, and 7-ft lengths. An air jet at the actuator tip shoots forward to blast dirt out of cracks and corners, then switches back to suction, controlled by a fingertip valve. A fumigant ejector accessory is available. Made by **Vibro-Pneumatic Cleaner Co.**, Box 117, Detroit 2, Mich.

▲ For more details circle NED-714 J9 on enclosed inquiry slip ▲

Vinyl Hose & Couplers

Hofmann Engineering Co. — Air, water, oil, and chemicals can be safely handled in H-52 vinyl plastic hose, couplers, and fittings. The nickel and chrome plated Quik-Koupler is offered in 45 sizes, according to 8-page illustrated catalog. Hose advantages are outlined.

▲ For more details circle NED-715 J9 on enclosed inquiry slip ▲

NEW!

Keeps Pipe Joints Lubricated on Temperatures Up to 1050° F.

This new, proven thread compound has no equal for high-temperature/high-pressure installations. Provides better lubrication when assembling screwed or flanged joints . . . prevents seizure and galling when taking down. Crane Formula 425-A doesn't deteriorate in can. Conforms to Military Specification MIL-A-907. Stocked in 1- and 4-pound cans by your local Crane Branch or Crane Wholesaler.

FREE SAMPLE . . . Just ask your Crane Representative

CRANE® — Crane Co., Gen'l Off.: 836 S. Michigan Ave., Chicago 5, Ill.

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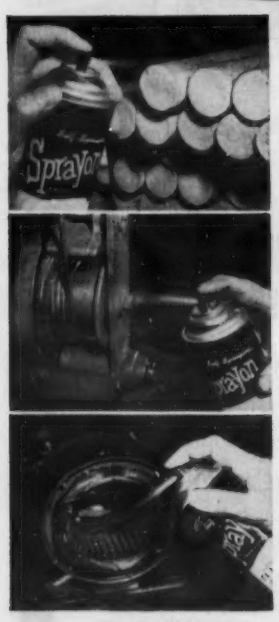

The better, faster, cheaper way to do a hundred maintenance jobs!

Save time and labor—get better results with "push-button maintenance". First full line of aerosols covers virtually every self-spraying product used in industry, from silicone mold release to blue layout fluid. The complete Sprayon line includes a number of uncommon items—some of which may solve problems for you. Stocked by selected Industrial Distributors and mill supply houses. Manufactured by Sprayon—oldest and leading custom-loader of aerosol specialties.

COLOR CODE ENAMELS
MARKING PAINTS
EQUIPMENT FINISHES
SPECIAL LUBRICANTS
PROTECTIVE COATINGS
DEGREASERS

WRITE FOR FREE HANDBOOK
of 46 self-spraying maintenance and production aids.
Keep this handy reference in your file.

Some key territories are open for industrial agents and distributors. Write for information.

Industrial Supply Division
SPRAYON PRODUCTS, INC. 2063 East 65 St., Cleveland 3, Ohio

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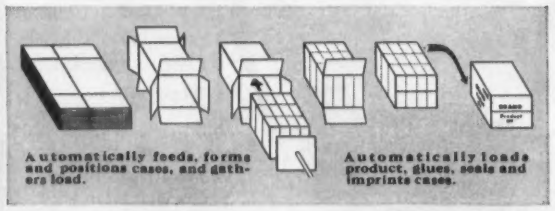
Take the HANDS out of PRODUCT HANDLING

Let Packomatic* equipment do any or all your casing operations AUTOMATICALLY

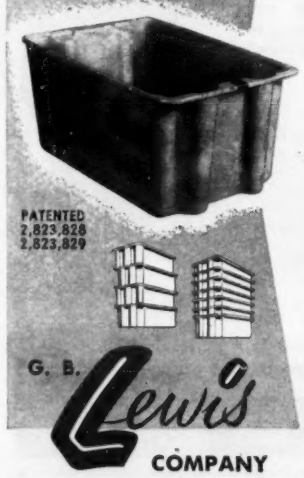


FOR CASING ROUND, SQUARE, RECTANGULAR OR FREE-FORM PACKAGES OF VIRTUALLY ANY SIZE. If you employ even one person per shift to hand-form cases, or to hand-pack, hand-seal, or hand-imprint them, then it can pay you to install Packomatic equipment. Write, phone or wire for facts on how to reduce your casing costs.

J. L. FERGUSON COMPANY
Box 1226, Phone 6-6275, Joliet 12, Illinois

▲ For more details circle NED-716 J9 on enclosed inquiry slip ▲

BIGGER, SAFER PAYLOADS with LEWIS STACK-n-NEST® PANS



here's why

MOLDED ONE-PIECE CONSTRUCTION Heat pressure molded in one piece of tough, resistant fiberglass reinforced polyester. Smooth interiors and exteriors prevent damage to workers or contents. Maximum cubic capacity.

EXTRA-HEAVY REINFORCEMENT A tough steel wire scientifically gauged to each container size is embedded in the rim; bottom corners and edges are molded extra thick for maximum strength.

TON-AND-A-HALF SAFE LOAD! Each Stack-n-Nest pan is guaranteed to safely carry a load of 3000 pounds.

STACK AND NEST Pans stack and nest in their own dimension . . . no attachments or cross stacking. Nested pans release instantly, loaded or light, dry or oily.

BUILT TO TAKE IT These lightweight pans cannot corrode, rot, or rust, won't shatter or dent, are unaffected by temperature variances.

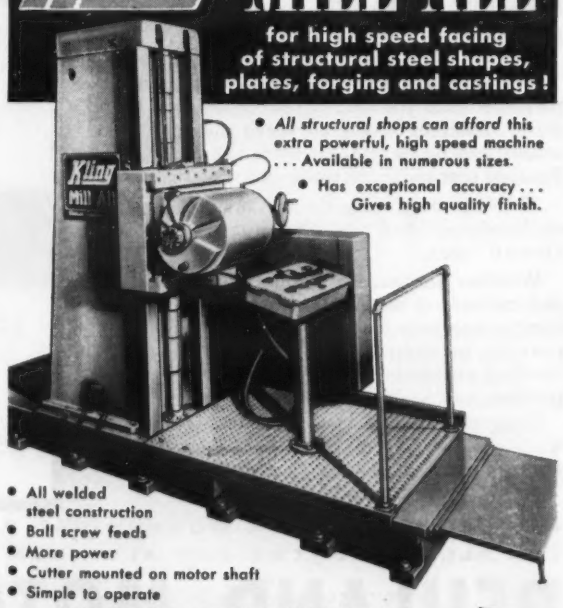
VERSATILE Eight sizes to meet all requirements. Molded-in colors available: red, green, grey. Dust-tight co ·s and four-wheel caster dollies also available in two sizes.

Send for descriptive literature on complete container line.

G. B. Lewis COMPANY — Dept. NED, WATERTOWN, WIS.

▲ For more details circle NED-718 J9 on enclosed inquiry slip ▲

Kling MILL-ALL
for high speed facing of structural steel shapes, plates, forging and castings!



- *All structural shops can afford this extra powerful, high speed machine . . . Available in numerous sizes.*
- Has exceptional accuracy . . . Gives high quality finish.

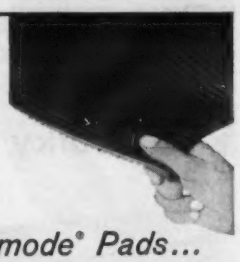
- All welded steel construction
- Ball screw feeds
- More power
- Cutter mounted on motor shaft
- Simple to operate

WRITE for full information and Bulletin MA-1

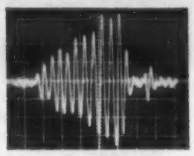
KLING BROS. ENGINEERING WORKS
1320 N. KOSTNER AVENUE • CHICAGO 51, ILLINOIS
Export Distributor: Simmons Machine Tool Corp., 50 E. 42nd St., New York 17
Exclusive Canadian Distributor: Rudel Machinery Company, Limited

▲ For more details circle NED-719 J9 on enclosed inquiry slip ▲

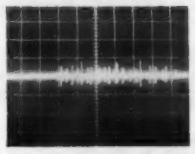
CUT MACHINE NOISE



Low-cost Isomode® Pads... cut vibration from this



to this

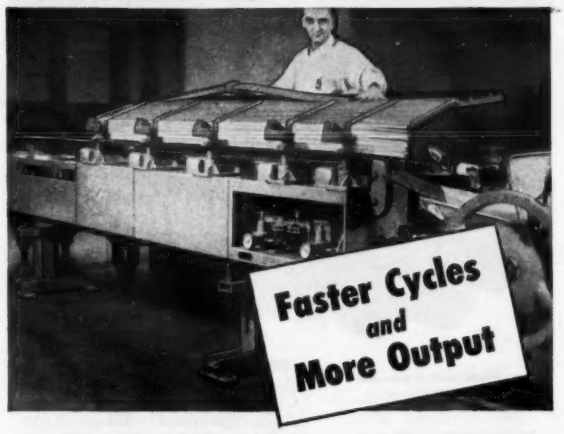


MB Isomode Pads made this difference in noise-creating vibration for less than $1.50 per ton of machinery. Compare floor vibration at bolted-down punch press (top), and vibration with bolt removed, Isomode Pad under foot.

Isomode Pads, made of oil- and water-resistant DuPont neoprene, can make the same difference in *your* plant. Simply cut section from pad—slide it under machine foot. That does it. Pads absorb shock and shake... reduce floor and machine damage... eliminate hold-down bolts... slash noise levels. See for yourself. Order trial carton of ten 18"x18" pads, or send for informative bulletin.

MB ELECTRONICS
A DIVISION OF TEXTRON ELECTRONICS, INC.,
1066 State St., New Haven 11, Conn.

▲ For more details circle NED-720 J9 on enclosed inquiry slip ▲



LIPE *Automatic Machine Loading*

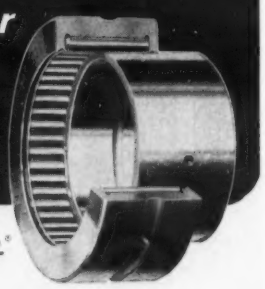
Bar Feeds can increase production of your automatics 40%, 90%, even 200%. Continuous, automatic feed of stock of any length, shape or material in close-tolerance feedouts. Eliminates time and energy consuming hand-loading. Frees operators for finer work on quality . . . machine set-ups . . . care of tools. Write or phone for full information.

Lipe-ROLLWAY CORPORATION SYRACUSE 1, N.Y.

PIONEERS IN PNEUMATIC BAR-FEEDING

▲ For more details circle NED-721 J9 on enclosed inquiry slip ▲

For heavier loads in smaller space



Use McGill *MULTIROL*® full type needle roller bearings

MULTIROL SE series bearing construction provides a full complement of small diameter rollers in a hardened and ground outer race. This packs maximum load capacity in minimum radial space.

Precision ground rollers and retaining end shoulders built integral with the outer ring eliminate loose or welded-in end washers; assure ease of assembly, precision performance and longer life. Simplified grease lubrication reduces maintenance.

For greater radial space savings on a larger hardened and ground shaft, the outer ring and roller assembly may be used without an inner.

Write for helpful Bearing Handbook No. H-54-B

engineered electrical products
McGILL®
precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, INDIANA

▲ For more details circle NED-722 J9 on enclosed inquiry slip ▲

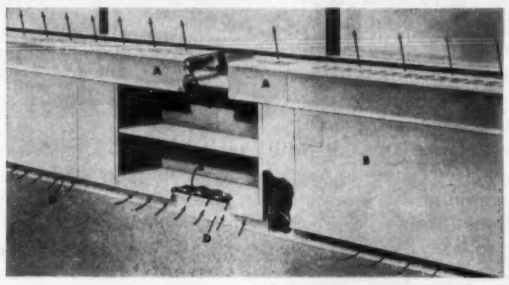
DRILL-MILL-GRIND HEAD is 1½-hp, 300-3000 rpm unit

Model 10324 drill-mill-grind head operates as a conversion tool or as an automation tool in a fixed or building block setup for drilling, tapping, milling, boring, and honing. As a conversion unit it readily mounts on lathes, planers, and mills. The 50-lb head is powered by a 1½-hp three-phase continuous duty motor and has a No. 2 Morse taper spindle and Timken front bearings. Speed range from 300 to 3000 rpm is through six V-belt sheaves, three on motor and three on spindle gear drive. It measures 18 in. long over-all and features 360 degree positioning of spindle and gear drive. Head is available with air or hydraulic slide assemblies and with an abrasive belt idler for grinding and polishing. Made by **Larmet Co.**, 108 Wiggs St., Griffith, Ind.

▲ For more details circle NED-723 J9 on enclosed inquiry slip ▲

PERIMETER AIR CONDITIONING cooled or heated air enters along outside wall, covers entire room

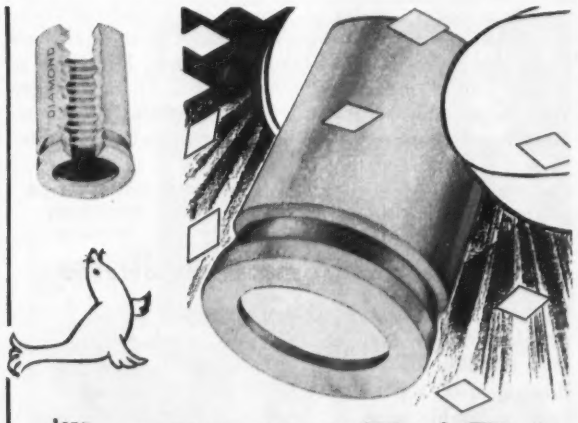
Continuous flow of conditioned air along the outside wall is provided by Wall-Line perimeter air conditioning. Air circulates throughout the room, eliminating

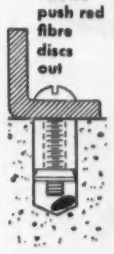


"dead" areas. System uses a UniTrane air conditioning unit with preassembled ducts. Effectiveness remains constant, even if interior walls and partitions are moved.

In cutaway view, fans (A) push air through ducts along exterior wall. UniTrane air conditioner (B) circulates chilled or hot water. One-half-inch insulation (C) also acts as a sound deadener. After air has circulated in the room, it returns to be reheated or cooled through air intakes (D). Air can also recirculate to the air conditioner through an intake under the shelves (E). Continuous matched shelving and storage cabinets (optional) can be factory assembled with the ducts. Made by **Trane Co.**, 2018 Cameron Ave., La Crosse, Wis.

▲ For more details circle NED-724 J9 on enclosed inquiry slip ▲





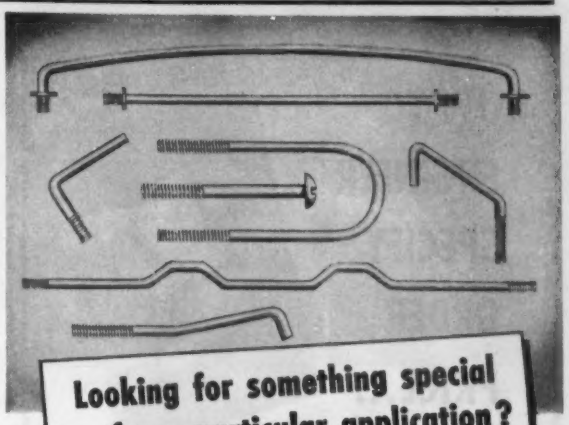
"DIAMOND'S NEW *Red Seal* MAKES THIS SCREW ANCHOR BETTER THAN ANY. RED FIBRE DISC KEEPS DIRT OUT of THREADS and INDICATES BOTTOM for CORRECT INSTALLATION,"

says J. A. WRIGHT, Vice President

Samples on request. Use your letterhead.

DIAMOND EXPANSION BOLT CO., INC.
GARWOOD, NEW JERSEY

▲ For more details circle NED-725 J9 on enclosed inquiry slip ▲



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...rely on Ohio Rod Products for—

SERVICE—QUALITY—UNIFORMITY

OHIO ROD makes Special Headed and/or Threaded Fasteners in short and long length—in short or long runs. Headed, Threaded, Collared, Bent, or Offset.

Send drawings or blueprints for quotes and literature.

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20254 1st AVENUE • BEREA, OHIO

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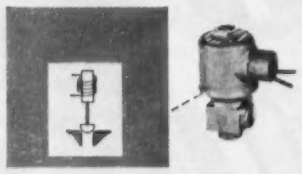
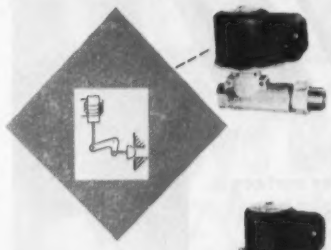
Your best single source for Solenoid Valves

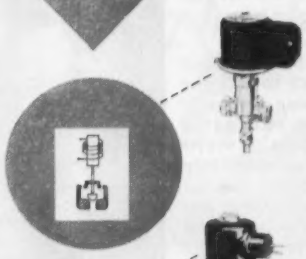
If you use solenoid valves, you're using one or more of four basic types General Controls makes the best of all four . . provides all the information and help you need, *plus* outstanding field service before and after sale. service that's backed by seven factories and a network of 42 branch offices in the United States, Canada and West Germany.



DIRECT ACTING type, used where frequent operation demands high operating life. The General Controls K-27, with only one moving part, cycles for millions of operations. It is suitable for fuel lines, sprayers, vending machines, air or hydraulic applications.



LEVER ACTING type for high pressure liquid lines. The famous General Controls K-10 is widely used on primary safety shutoff in gas and fuel oil lines. Controls feed water, steam, air... an excellent general purpose valve.



PILOTED PISTON type, designed expressly for high pressure and high flow. Handles 12 to 15 flow mediums water, air, gas, steam, petroleum derivatives, corrosives, freon and all types of refrigerants. This is the General Controls K-15.

DIAPHRAGM type has no sliding surfaces, is excellent for high flow applications. The K-181, for example, is widely used in control of water to commercial dishwashers, air to plastic molding machines. Very low in cost... in great demand where over-all production is vital.

For full information, call your nearest factory branch office or write

GENERAL CONTROLS
Automatic Controls for Product or Process
Glendale, Calif. • Skokie, Ill. • Guelph, Ontario, Canada
Six plants—42 factory branch offices serving the United States and Canada

▲ For more details circle NED-727 J9 on enclosed inquiry slip ▲

HOW TO ENGINEER SPECIFY ORDER PRICE...

HYDRAULIC CYLINDERS

Here is complete engineering data on Hannifin's newest line of hydraulic cylinders. Every mounting style is fully dimensioned in all sizes. Standard models or special modifications are made easy to specify. The price sheet, too, is easy to understand, easy to use.

Write for Bulletin 113-B.

HANNIFIN

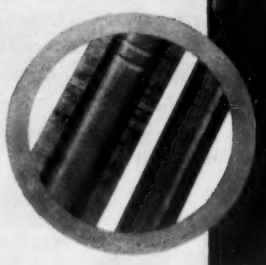
Hannifin Company, 527 South Wolf Road, Des Plaines, Ill.

(Hannifin Company is a division of Parker-Hannifin Corporation)

▲ For more details circle NED-728 J9 on enclosed inquiry slip ▲

NEW ELLIOTT TUBE EXPANDERS

roll tubes into thick sheets in one pass



Use of NEW continuous-rolling technique here—shows uniform seal, with all Keys preserved, and no signs of shear

OLD step-rolling method results in non-uniform surface . . . distortion of Keys where rolls have overlapped

Better Seal...Smoother surface... Much Faster operation

This new concept in tube expanders was developed by Elliott to roll the thickest tube sheets. Using a continuous-rolling method, it eliminates many problems common to step-rolling, may be operated protractively or retractively, saves time, assures uniform, smooth surfaces, avoids annular voids or erratic tube inside diameters, provides better seal.

Accessories

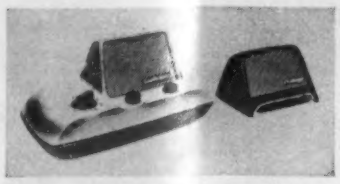
Elliott also makes a complete line of retubing accessories, including both electric and air magnetic Tube Rolling Controls, Tube Gages, Tube Plugs, Tube Cutters, etc.—in addition to a complete line of tube expanders. *Ask for Bulletin Y-52.*

ELLIOTT Company
LAGONDA PLANT
SPRINGFIELD, OHIO

Y9-5A

▲ For more details circle NED-729 J9 on enclosed inquiry slip ▲

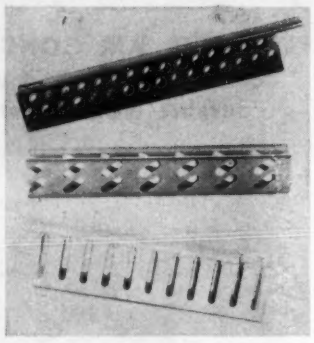
INTERCOM SYSTEMS
6 and 12-station master stations



Three stages of amplification and a selenium rectifier are contained in each of two master stations for the Challenger Futura intercommunication systems. Model CHM6 master station for systems up to six stations is housed in a gray and black plastic cabinet. It has volume control, press-to-talk button, and a seven-position selector. In multiple-master use, each unit can call any one station or all simultaneously. A "mute" setting silences background noise. Similar CMH12 master station for systems up to 12 stations does not permit calling all stations at one time. Each measures 5¼ x 10½ x 4¾ in. Matching Model CHR remote station contains a speaker with Alnico magnet and measures 3½ x 5⅝ x 3⅝ in. Made by **Bogen-Presto Co.**, Box 500, Paramus, N. J.

▲ For more details circle NED-730 J9 on enclosed inquiry slip ▲

WIRING RACEWAYS
made of durable reinforced plastic



Wide range of wire opening sizes and shapes is available in Panel Chanel wiring raceways in white, gray, and black colors as standard. Other colors can be ordered. The lightweight, durable, easily cut reinforced plastic withstands high temperatures and is not subject to sagging or cold flow. Installation is with standard tools. Raceways may be selected to harmonize or contrast with their backgrounds. Several styles are shown. Made by **Stahlin Brothers, Inc.**, 460 Maple St., Belding, Mich.

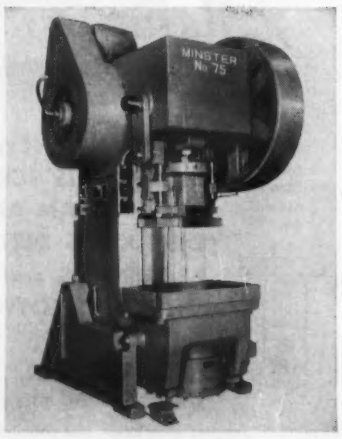
▲ For more details circle NED-731 J9 on enclosed inquiry slip ▲

ELECTRONIC RELAY
has 1800 w resistive load rating

Grid input of the Model 101 electronic relay allows only 20 microamperes to flow through the control contacts, permitting use of any type of on-off controller. Resistance in the circuit load may be as high as 100,000 ohms. The 3 x 4 x 5-in. unit is rated at 1800 w resistive load. Output relay is rated at 20 amp, 120 v noninductive load. Its time delay switch provides a delay of about 1 sec to prevent chattering of controlled output. Load may be normally on or off with the controlling input open. Unit has a power output indicating light and an 11-ft, 14-gage, three-wire cable with plug. Price is $49.50. Made by **Berkeley Instrument Co.**, Box 346, Berkeley Heights, N. J.

▲ For more details circle NED-732 J9 on enclosed inquiry slip ▲

75-TON OBI PRESS
flywheel and gear types offered

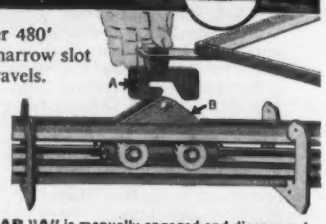


Optional recirculating lubrication system for this 75-ton single-geared, open-back inclinable press continuously lubricates main and connection bearings, gibs, gears, and counterbalances. It is enclosed within the press frame for protection from damage. Combination air friction clutch and brake unit provides torque overload control and controlled cycling and inching. The No. 75 press is furnished in flywheel and geared types. Made by **Minster Machine Co.**, Minster, Ohio.

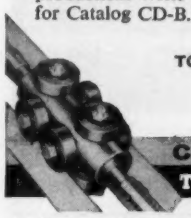
▲ For more details circle NED-733 J9 on enclosed inquiry slip ▲

AMERICAN "Chainless" in-the-floor conveyor tows bulky 1000 lb. loads!

Metal floor plates cover 480' conveyor, except for a narrow slot in which the tow bar travels. Personnel or vehicles can cross the assembly line without stopping production. Write for Catalog CD-B.



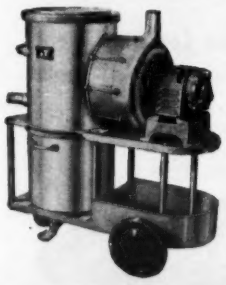
TOW BAR "A" is manually engaged and disengagad in trolley clevis "B". Eight-wheeled trolleys ride inside a 4-rail track. Steel rods with ball-socket joints connect trolleys.



CONVEYOR DIVISION
THE AMERICAN MONORAIL CO.
Fourth & Franklin Streets • Tipp City 7, Ohio

▲ For more details circle NED-734 J9 on enclosed inquiry slip ▲

Model 460, a versatile 1½ H.P. unit



THOROUGH CLEANING is assured because Invincible Vacuum Cleaners are heavy-duty machines specifically designed for industry. These units clean not only floors, but walls, ceilings, beams, bins, machinery, etc.

FASTER CLEANING obviously results because Invincibles are light and readily portable; they can be operated by one man.

CHEAPER CLEANING. Many tests have shown that Invincibles collect more dirt in less time, and hence produce substantial savings in labor costs.

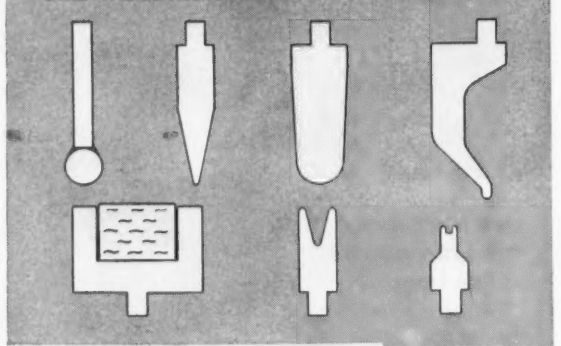
WRITE FOR COMPLETE INFORMATION

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

▲ For more details circle NED-735 J9 on enclosed inquiry slip ▲

Alloy Forming for
AIRCRAFT
MISSILES
ROCKETS
and
OTHER FABRICATIONS

CHICAGO ALLOY-FORM DIES
For All Makes of Press Brakes



Here are a few of the commonly used types of CHICAGO Alloy-Form dies available for prompt delivery. For further data ask for Bulletin AFD-958. Complete recommendations and quotations on Alloy-Form dies or any special die upon request.

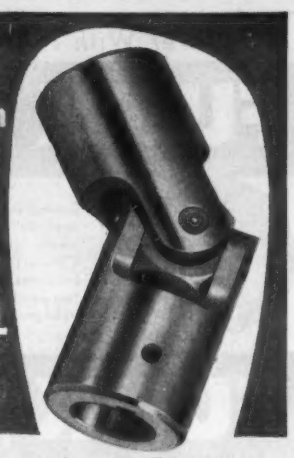
DREIS & KRUMP MANUFACTURING CO.
7436 S. Loomis Blvd., Chicago 36, Ill.

Press Brakes • Press Brake Dies • Straight-Side-Type Presses
Hand and Power Bending Brakes • Special Metal-Forming Machines

▲ For more details circle NED-736 J9 on enclosed inquiry slip ▲

Make your next connection with

asg UNIVERSAL JOINTS



They are made to provide smooth, more efficient transmission of power and are available from stock in 13 sizes with bored or solid hubs ranging from .375" to 4.000". Special bores, bores with keyways or setscrews are available upon special order.

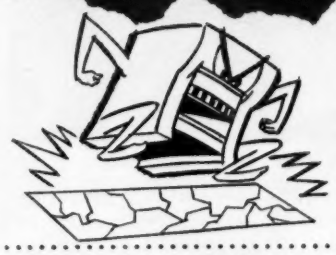
Joints with hub diameters of .750" and larger have a self-closing snap ball oiler while the small pin is held in place with a self-locking snap ring.

Send today for Bulletin No. 527 describing the full line of ASG Universal Joints available from your nearest distributor.

AMERICAN STOCK GEAR DIVISION
PERFECTION GEAR COMPANY, HARVEY, ILL., U.S.A.

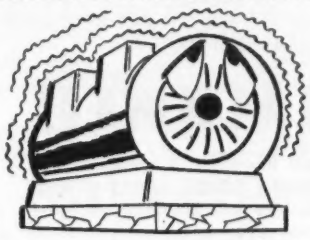
▲ For more details circle NED-737 J9 on enclosed inquiry slip ▲

If you have any of these MACHINERY FOUNDATION PROBLEMS in your plant . . .



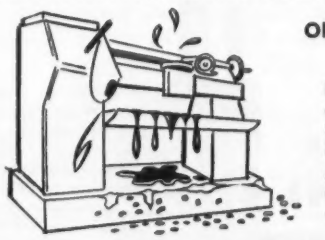
IMPACT

Eliminate cracked, shattered bases under drop forges, presses, shears and other heavy equipment with high-strength No. 648 Grout.



VIBRATION

Avoid damage to valuable equipment! No. 648 Grout actually bonds to metal . . . permanently anchors compressors, pumps, engines and motors.



OIL OR CHEMICAL DAMAGE

Prevent foundation crumbling and spalling! Non-porous No. 648 Grout is completely impervious to oils . . . resists most chemical attack.

8939-CO

you need CEILCOTE No. 648 GROUT

Only Ceilcote No. 648 Grout combines high strength with corrosion resistance and metal-bonding qualities to end costly damage, repairs, and downtime. No. 648 Grout handles easily . . . sets-up within 24 hours without shrinking or settling . . . yet is five times stronger than concrete! Get all the facts before starting your next grouting job.

Send for Technical Sales Bulletin today!

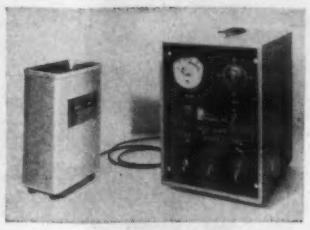
ANOTHER FIRST BY CEILCOTE

CEILCOTE

THE CEILCOTE COMPANY, INC.
4838 Ridge Road, Cleveland 9, Ohio

▲ For more details circle NED-738 J9 on enclosed inquiry slip ▲

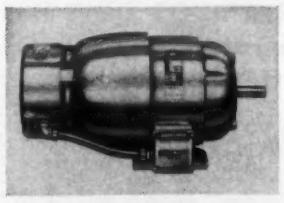
ULTRASONIC PARTS CLEANER
has 1-gal stainless steel tank



Radiating surface of 12 sq in. covers 43 per cent of the bottom of the polished stainless steel tank of the Model 200 ultrasonic small parts cleaner. Tank capacity is 1 gal. A 115-v ac generator, designed for continuous operation, delivers an average power output of 60 w and peaks of 240 w. Features include a 0 to 60-min timer, one-tube oscillator, provision for remote control, and a choice of either of two transducers. Made by **National Ultrasonic Corp.**, 111 Montgomery Ave., Irvington, N. J.

▲ For more details circle NED-739 J9 on enclosed inquiry slip ▲

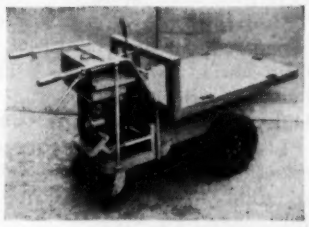
FAN-COOLED BRAKEMOTOR
1 to 30-hp ratings available



Doughnut type magnet in the brake of this Xpandable Design brakemotor allows use of through motor shaft, as well as both a magnetic brake and cooling fan. Totally enclosed and sealed unit has frame, endbells, cooling fan, and fan cover of cast aluminum alloy for light weight and good heat dissipation. Ratings from 1 to 30 hp and frame sizes of 182 to 326U are available. It is also offered as a Motoreducer power package. Drive motors can be standard squirrel-cage, wound-rotor, or fluid-shaft. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

▲ For more details circle NED-740 J9 on enclosed inquiry slip ▲

POWERED CARRIER
handles 1500-lb payload

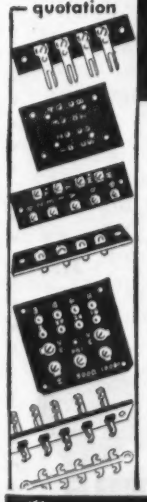


Payloads up to 1500 lb are carried with four-wheel stability by the 7-hp gasoline Power Buggy which has a forward and reverse gear-type enclosed transmission and automotive type differential. Latter delivers power to both wheels while allowing small radius turns. Model shown has rigid flat bed which is interchangeable with a 10-cu ft bucket. Attachments include a snow plow unit, as well as a dump-type platform. Engine has manual start and oil bath air filter. Power is delivered through a multiple V-belt drive with spring loaded belt tension clutch. Made by **Aeroil Products Co.**, 69 Wesley St., South Hackensack, N. J.

▲ For more details circle NED-741 J9 on enclosed inquiry slip ▲

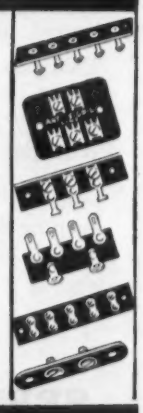
Send your specifications for prompt quotation

Hundreds of standard **JONES TERMINAL PANELS** *Complete Equipment* FOR SPECIALS



JONES MEANS Proven QUALITY

Several pages of Jones Catalog No. 22 illustrate standard and special panels we are constantly producing. Latest special equipment enables us promptly to produce practically any panel required. Send print or description for prices without obligation. Hundreds of standard terminal strips also listed. Send for Catalog, with engineering drawings and data.



Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING COMPANY
CHICAGO 24, ILLINOIS
DIVISION OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-742 J9 on enclosed inquiry slip ▲

Norgren **SPRAY LUBE**

- Less Machine Down-Time
- Increased Tool Life
- Better Finishes

Write for Descriptive Literature

If it's Norgren, . . . It's Dependable.

C. A. NORGREN CO.

3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

▲ For more details circle NED-743 J9 on enclosed inquiry slip ▲

New Johnson *Continucast** 105 Inch Bronze Bars

ECONOMICAL • CONVENIENT • HIGH QUALITY

Now famous Johnson quality solid and tubular bronze bars are being produced by a continuous casting method to give you the economy and convenience of 105" lengths.

Continucast bars are economical because your distributor can cut this long bar in multiples of a variety of lengths to suit your requirements. You buy and handle less metal—pay for only the metal you use.

The continuous casting method improves the physical qualities of the Johnson alloy 72 (SAE 660) because the distribution of lead and other elements is more uniform. This improves machinability, gives you greater tensile, yield, impact and fatigue properties.

Johnson **Continucast** 105" Bronze Bars are available in 21 sizes of solid bars from ½" to 3" diameter and in 118 sizes of tubular bars which range from ½" to 2½" ID and from 1" to 3" OD.

For full information ask your distributor or write for folder JBL-14.

*Trademark

JOHNSON Bearings

Johnson Bronze
580 South Mill Street • New Castle, Pa.
Subsidiary: Apex Bronze Co., Oakland, Cal.

▲ For more details circle NED-744 J9 on enclosed inquiry slip ▲

4 Ways Better
For Every Sweeping Job!

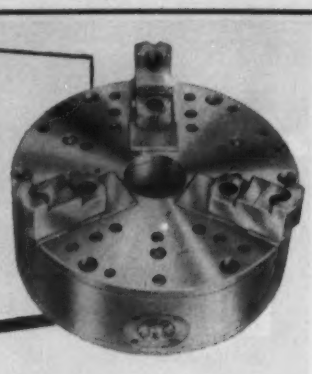
1. *Highest quality materials and construction*
2. *Outlast ordinary brushes 2 to 1*
3. *Tufts cannot come out or come loose*
4. *27 styles and sizes to choose from*

MD Milwaukee Dustless Brush Co., 530 N. 22nd St., Milwaukee, Wis.

FIRM _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-745 J9 on enclosed inquiry slip ▲

THE FIRST MAJOR CHUCK DEVELOPMENT *in 50 years*



• This radically different chuck combines all the desirable features of hand and power chucks. It has accuracy within .001 TIR, repeatability within .0005 TIR, unequalled gripping power, and no size limitation.

This major chuck development is a principle untilizing combination of pinion, gear plate, screw and wedge. The lug-type pinion is turned manually or by a power wrench. A pinion engages the gear plate causing the screw to move the wedge. The action of the screw on the wedge controls the chuck jaws. The force of the wedge on the jaws holds the work with tremendous power

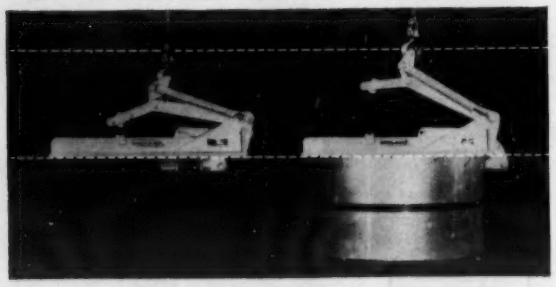
In addition to this unique, new principle, this chuck offers such features as over-tightening protection, operator protection, higher speeds, center-hole chucking and many more. For details, write us at the address below, Department 569.

SKINNERCHUCKS

THE SKINNER CHUCK COMPANY • NEW BRITAIN, CONNECTICUT

▲ For more details circle NED-746 J9 on enclosed inquiry slip ▲

NEW HEPPENSTALL COIL TONGS



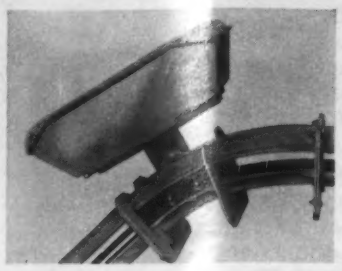
stack large and small diameters to within 24 inches of the crane hook

Only two feet high at greatest extension, these new Heppenstall Tongs put more coils into less space, faster. By simple manual adjustments, these tongs handle inside diameters as small as 5 inches and up to 20 inches, outside diameters from 6 to 40 inches, with a 1,000 pound capacity rating. Custom models of this same design will handle coils up to 3,000 pounds. For more information and a quotation, call your Heppenstall Company Representative or send us your load and operating requirements. Heppenstall Company, Materials Handling Division, New Brighton, Penna.

HEPPENSTALL COMPANY
PITTSBURGH 1, PENNSYLVANIA
PLANTS: Pittsburgh, Pa. • Bridgeport, Conn.
New Brighton, Pa.
MIDVALE-HEPPENSTALL COMPANY
Nicetown, Philadelphia 40, Pa.
Die Blocks • Forgings • Back-up Roll Sleeves
Rings • Industrial Knives • Pressure Vessels
Hardened and Ground Steel Rolls
Materials Handling Equipment
IF IT HANGS FROM A CRANE . . .
HEPPENSTALL CAN HANDLE IT

▲ For more details circle NED-747 J9 on enclosed inquiry slip ▲

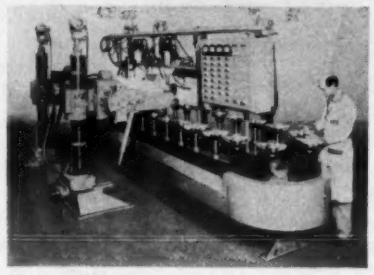
PAN ATTACHMENTS
move materials on conveyor track



Riding a few inches above Chainless conveyor track, pan or pallet attachments will move materials over long distances without need for transfer points. Clevis attachment, fastened to bottom of pan, bolts onto trolley's vertical axles. Pans ride smoothly without pitching or twisting. Trolley has eight wheels, four on horizontal axles which roll on either lower or upper tracks and four wheels on vertical axles rolling against side rails. Pans can be used on inclines or level installations. Made by **American MonoRail Co.**, Conveyor Div., Fourth & Franklin Streets, Tipp City, Ohio.

▲ For more details circle NED-748 J9 on enclosed inquiry slip ▲

AUTOMATIC POLISHER
work mounted on rotating spindles processed by buff, wheel, or belt



Parts can be polished and buffed at high production rates by this straight line automatic machine which features compactness and operation flexibility. Basically it consists of an in-line conveyor that moves 1-ft long cast iron platens around the periphery at feed rates from 4 to 29 fpm. Work spindle assemblies attached to each platen can be driven in either direction at any position along the conveyor. Spindles can also have camming surfaces to provide preset work motions at any work positions.

Work is loaded and unloaded at the end of the machine. Platens can be driven continuously or indexed from station to station as desired. Separate adjustable lathes placed as needed can be fitted with rotating buffs, polishing wheels, or abrasive belt heads.

Liquid compound applicators are air operated. Accessories include a right angle attachment for work spindles. Made by **Acme Mfg. Co.**, 1400 E. Nine Mile Rd., Detroit 20, Mich.

▲ For more details circle NED-749 J9 on enclosed inquiry slip ▲

Stainless Steel Wire

Uddeholm Co. of America—General qualities of 27 different types of ferritic, austenitic, ferritic-austenitic, and martensitic stainless steels are described in 78-page illustrated book. Data presented on cold drawn wire includes tolerances, mechanical and magnetic properties, available finishes, sizes, forms, and applications.

▲ For more details circle NED-750 J9 on enclosed inquiry slip ▲

WHIRLPOOL develops EXCELLENT INCENTIVE PLAN... Management knows exactly how much work is performed by every lift truck at the Marion, Ohio Division of the Whirlpool Corporation.

Servis Recorders attached to each lift truck provide a permanent record which shows running time, idling time, forks empty and loaded, and stopped time.

This proof of work accomplished and the bonus based on this proof give workers a desire to keep trucks loaded and moving.

Whirlpool Corporation reports fewer trucks are needed with Servis Recorders on the job, and has also saved money on record keeping because Servis Recorders keep time records automatically!

Key to the whole thing:

Work records kept automatically by

SERVIS RECORDERS

For information write:
The SERVICE RECORDER CO.
1013A Rockwell Avenue • Cleveland 13, Ohio

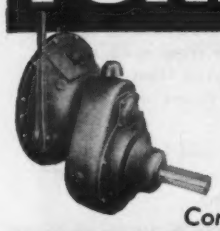
▲ For more details circle NED-751 J9 on enclosed inquiry slip ▲

Re-Power With FUNK Modular Units

FUNK TORQUE CONVERTERS

Extend the life of your engines, prevent stalls, eliminate damaging shock loads — re-power with FUNK Torque Converters. Compact units, fit SAE housings. FUNK Standard Flange System easily adapts other FUNK units for your power needs.

FUNK GEAR REDUCTIONS



Small, popular-make high speed engines equipped with low-cost FUNK Gear Reductions develop the same power output at substantial savings over large expensive slow speed engines. Eliminate expensive and dangerous V-belt and chain drives. Exclusive FUNK Straddle Mounted Pinion. Proved Performance.

Consult Your Dealer or Write

FUNK MFG. CO. P. O. BOX 577-C COFFEYVILLE, KANSAS

▲ For more details circle NED-752 J9 on enclosed inquiry slip ▲

Easy to use 26-page manual helps you select rotary pumps for hundreds of applications. Includes friction data on valves, fittings and pipelines; handy conversion tables for every-day use; properties of over 100 common liquids. Send for Blackmer Bulletin 33 today.

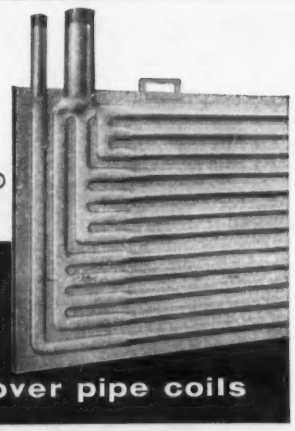
BLACKMER

"liquids materials handling"® equipment
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
See Yellow pages for your local sales representative

▲ For more details circle NED-753 J9 on enclosed inquiry slip ▲

NEW

MULTI-ZONE **PLATECOIL®**



Years ahead features plus time-proven advantages over pipe coils

New MULTI-ZONE configuration, operating pressures up to 250 psi, plus the time-proven advantages of PLATECOIL over pipe coils open up a wider than ever range of tank and process heating and cooling applications. Get the facts now on the new MULTI-ZONE PLATECOIL line.

WRITE FOR NEW BULLETIN P57.

PLATECOIL® DIVISION
TRANTER MANUFACTURING, INC.
LANSING 9, MICHIGAN

▲ For more details circle NED-754 J9 on enclosed inquiry slip ▲

...OR BUCKLED AND BROKEN MOVEMENT PLATES
...RUINED PRECISION ASSEMBLIES AND FINDINGS

Apco Mossberg's New Tiny Torque Screwdriver lets you control those delicate tiny torques from 0 to 3 tenths of an inch-ounce, or from 0 to 6, 8, or 10 tenths of an inch-ounce!

A Precision Jeweler's-Type Screwdriver, Tiny Torque "fits the hand," enables even the inexperienced to tighten tiny screws without shearing threads, cramping gears, fragile parts.

Designed for #0 to #2-56 screws, and for #0 to #4 screws using interchangeable hardened screwdriver blades. Only 4¾" long. Easy-to-read white, etched graduations on barrel. Write for Details!

APCO MOSSBERG COMPANY
161 Lamb Street, Attleboro, Mass.

▲ For more details circle NED-755 J9 on enclosed inquiry slip ▲

NEW SOLENOID VALVES *by Airmatic*

These corrosion-proof valves have only one internal moving part and a completely protected solenoid coil. The coil is fully sealed from air, oil, gas and water . . . and will not overheat on continuous duty. Coils for continuous or intermittent duty, a-c or d-c, are interchangeable.

Life expectancy is many millions of cycles and by renewing the one-piece valve plunger, many millions more can be expected. The plunger can be replaced without disturbing rigid piping.

OPTIONAL DESIGNS

MANUAL OVER-RIDE

MANIFOLD MOUNTING

DISTRIBUTORSHIPS FOR THESE NEW VALVES ARE AVAILABLE

ASK FOR CATALOG
All valve deliveries are made from stock.

SPECIFICATIONS		
	TWO-WAY	THREE-WAY
CATALOG NO.	91011	91011
PRESSURE RANGE	1/16" ORIFICE: 0-500 PSI 3/16" ORIFICE: 0- 70 PSI	1/8" ORIFICE: 0-300 PSI 3/16" ORIFICE: 0-100 PSI
ORIFICES	1/16" THROUGH 3/16"	1/8" AND 3/16"
VOLTAGE	MOST A-C AND D-C	MOST A-C AND D-C
DUTY	CONTINUOUS	CONTINUOUS
POWER CONSUMPTION	10 - 20 WATTS	10 - 20 WATTS
HEAT RISE	WITHIN UL LIMITS	WITHIN UL LIMITS

AIRMATIC VALVE, Inc.
7313 Associate Avenue • Cleveland 9, Ohio

EVERYTHING UNDER CONTROL
Phone: WOodbine 1-5320 • WESTERN UNION: Airmatic Valve, Inc., FAX, Cleveland, Ohio

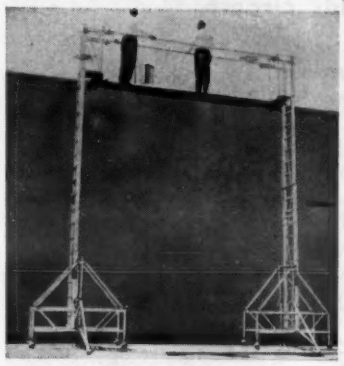
▲ For more details circle NED-756 J9 on enclosed inquiry slip ▲

INSULATING CLAMPS
for round and flat cable forms

Formed of ethyl cellulose and ribbed for extra strength, these self-insulating plastic clamps are made in styles to secure round and flat cable forms. Standard round sizes range from 1/8 to 1-in. diameter; flat styles, in 7/32 to 35/64-in. widths. Custom dimensions can be made to specification. Made by **Wm. Dudek Mfg. Co.,** Dept. NED, 4901 W. Armitage, Chicago 39, Ill.

▲ For more details circle NED-757 J9 on enclosed inquiry slip ▲

BRIDGING EQUIPMENT
30-ft platform between two towers



Vertical clearance over floor obstacles as high as 24 ft is provided by this 30-ft span bridging, designed for use between two Tallescope aluminum alloy towers. The adjustable height work platform is installed on the ground, tilted upright, and hoisted to the desired height. It locks automatically to towers for any span to 30 ft. Entire unit telescopes for rolling under trusses, pipes, or other overhead equipment. It also folds down for rolling through 30-in. doorways. Made by **Up-Right Scaffolds,** 1013 Pardee St., Berkeley 10, Calif.

▲ For more details circle NED-758 J9 on enclosed inquiry slip ▲

LARGE-NUMBER INDICATOR
operates continuously for 30,000 hr

Long life Type B7031 Jumbo Nixie indicator tube can operate continuously without failure for over 30,000 hr. Tube displays numerals through nine in a common viewing area. Characters are 2 in. high and visible from over 150 ft. Side viewing design makes possible close stacking of tubes for displaying a large amount of information in a minimum of space. Made by **Burroughs Corp.,** Electronic Tube Div., Box 1226, Plainfield, N. J.

▲ For more details circle NED-759 J9 on enclosed inquiry slip ▲

Give your product a lift with a

WHIZ-LIFTER
MATERIALS ELEVATING MACHINE—Assures speedy, automatic bulk product elevating into hopper of a weighing or filling machine without danger of spillage or breakage! Will handle drugs, hardware, pharmaceuticals, plastics, chemicals, etc., with trouble-free efficiency.

Write for literature

FRAZIER & SON
20-01 INDUSTRIAL WEST, ALLWOOD, CLIFTON, NEW JERSEY
Designers and manufacturers of • Volumetric and Net Weighing Machines • Parts Handling Equipment • Rotary Filling Machines • Conveying & Elevating Equipment

▲ For more details circle NED-760 J9 on enclosed inquiry slip ▲

BRUSHES

The solution to many major or minor brush problems can be solved with United States Graphite Company's USG Brushes. The shunt connections are permanent. Sizes are accurate for each application from fractional horsepower to locomotive diesel generator. Grades include carbon, carbon-graphite, electrographilitic, graphite, metal-graphite and silver graphite.

There is helpful, useful data in the complete but CONCISE USG Brush catalog B-56 and the USG grade list. Write for your copies today.

B-243-1

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

▲ For more details circle NED-761 J9 on enclosed inquiry slip ▲

CUT ANY REFRACTORY SHAPE
ARCH-SKEW-KEY-WEDGE WITH THE ALL-NEW-

Clipper "SAILS RIGHT THRU"

SUPERMATIC MASONRY SAW
with STA-LEVEL HEAD
and
HI-LO CONTROL WHEEL

NO ADJUSTMENTS TO MAKE
No Need to Turn Off Motor to Raise or Lower Cutting Head. Ready to Cut at Any Height From 0" to 17". . . No Levers or Knobs to Pull. No Gears, No Slides or Unnecessary Parts to Wear Out!

YOU NAME IT THE SAW— THE JOB— THE MATERIAL—
. . . Clipper will name the Best Premium Quality Blade . . . Break-Resistant, Abrasive or Diamond, to give you the Fastest Cut . . . at the Lowest Cost . . . with the Greatest Ease . . . Anytime . . . Anywhere! Mail the coupon or call your Clipper Factory Trained Representative for Same Day Service!

Clipper also builds the famous **"Select-A-Notch"** Masonry Saw—the Saw that one man can adjust from his cutting position priced from $335

Genuine Clipper Products Sold Direct—Immediate Shipment From Factory Branches Coast To Coast

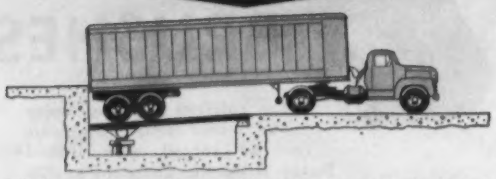
CLIPPER MANUFACTURING CO.
2810 S. Warwick • KANSAS CITY 8, MO. 236X

- ☐ Ship a SUPERMATIC Masonry Saw on FREE TRIAL
- ☐ Send FREE literature on Clipper Super-Matic and Select-A-Notch Masonry Saws
- ☐ Send information on Clipper Premium Quality Diamond, Break-Resistant and Abrasive Blades
- ☐ Send my Clipper Factory Trained Representative to see me

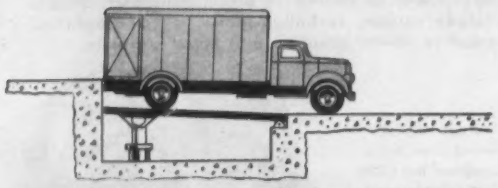
NAME _____
ADDRESS _____
CITY, STATE

▲ For more details circle NED-762 J9 on enclosed inquiry slip ▲

Rotary TRUCK LEVELER
saves dock space • speeds loading



High truck beds are lowered to dock level



Low truck beds are raised to dock level

The Rotary Truck Leveler, using economical hydraulic power, handles any highway carrier at any dock. Easily installed at new or existing buildings. Write for catalog RE-800.

ROTARY LIFT CO., 1065 Kentucky, Memphis 2, Tennessee

▲ For more details circle NED-763 J9 on enclosed inquiry slip ▲

SEND FOR YOUR COPY

You'll want to take a close look at this new Freeway Catalog, for it covers thousands of assemblies that can cut your anti-friction costs to just pennies per bearing. Design details, specifications, recommended speeds and load ratings have all been included, making it easy to select the semi-precision bearing that will meet your exact requirements.

Another point—Catalog 59 shows all five types of Freeway bearings, including the patented Split-Race series, to give a performance and application range unmatched by any other manufacturer. So . . .

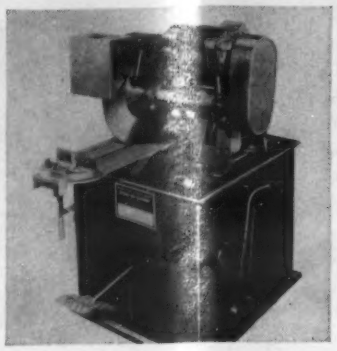
Write for your copy today • Catalog 59 is yours for the asking.

Other famous Freeway products include small metal stampings . . . and a complete line of standard and special washers, in any metal, shape, size or quantity. Catalog on these items also available.

Freeway WASHER & STAMPING COMPANY
P. O. Box 1756, Cleveland 5, Ohio

▲ For more details circle NED-764 J9 on enclosed inquiry slip ▲

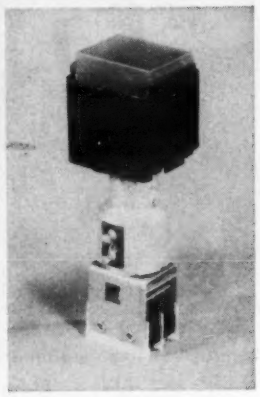
CUTOFF SAW
high speed cutting eliminates heat



Alloy saw blade and exact cutting angle enable the Model 8A Promacut multipurpose cutoff saw to cut so fast that the stock cannot absorb heat to change temper. Thus, no coolant is required. Smooth, virtually bur-free cuts are made at high speeds without clamp-down on all shapes of carbon, alloy, and stainless steel. Single-cut capacity is 4 x 4 x ½-in. angles, 12-in. by 20.7-lb channels, 6-in. x 12.5-lb beams, 1⅝-in. diameter bars, and 12 x ½-in. plates. Made by **Production Machinery, Inc.**, Box 322, Oakton Station, Des Plaines, Ill.

▲ For more details circle NED-765 J9 on enclosed inquiry slip ▲

PANEL SWITCH
solenoid holds circuit



Designed for use on control panels which require an electrical interlock system, this solenoid-held lighted pushbutton panel switch can also be used remotely to monitor equipment which the switch controls. Solenoid holds the circuit after switch is actuated. If solenoid is not wired in the switch circuitry, unit functions as a momentary action control. Unit consists of colored plastic pushbutton, two 6 or 28-v lamps, a double-pole 5-amp switch, and a 28-v solenoid integral with pushbutton mechanism. It takes up about 1 sq in. of panel space. Made by **Electrosnap Corp.**, 4220 W. Lake St., Chicago 24, Ill.

▲ For more details circle NED-766 J9 on enclosed inquiry slip ▲

WATER REGULATING VALVE
controls temperature to 2 degrees

Exact amount of water required for a particular industrial cooling system application is automatically supplied by the Model 90 water temperature regulating valve. It controls to within 2 degrees and accurately regulates flow. Two ranges are 60 to 120° F and 100 to 160° F. Adjustments are quickly made by hand. Made of noncorrosive materials, the valve can be used in any water cooling system with pressures up to 125 psi. Water flow is 9 gpm with 30-lb drop. Valve is offered with ½-in. line strainer, bleeder assembly, and thermometer. Made by **Vic Mfg. Co.**, 1313 Hawthorne Ave., Minneapolis 3, Minn.

▲ For more details circle NED-767 J9 on enclosed inquiry slip ▲

DRY VACUUM UNIT
for rugs, hard floors, and walls

In one trip with the SpeedClean dry vacuum unit a complete maintenance clean-up can be done in plant offices on rugs, hard floors, walls, and overhead trim. Unit has disposable filter dust bag located at rear of machine and a reusable large refuse bag with top draw string. Another feature is the Dust Mop Well which allows dust mops and cloths to be shaken inside the building without stirring up dust. A valve is opened to divert suction to the well. Utility basket will carry an average supply of towels, soap, waxes, and cleaners. Four models are made by **Nobles Engineering & Mfg. Co.**, 645 E. Seventh St., St. Paul 6, Minn.

▲ For more details circle NED-768 J9 on enclosed inquiry slip ▲

ALL NEW Clarke FLOOR MAINTAINER

Whisper-quiet, powerful, perfect balance, low over-all height, only 10⅞" — all the features you've wanted in a floor machine. And its interchangeable attachments permit it to scrub, wax, polish, steel wool, buff, disc sand, grind . . . even shampoo carpets and rugs. Other features include dual switch control, planetary type gear drive, totally enclosed motor, fully adjustable handle, 5" diameter wheels, electrically controlled solution feed. There's nothing like the new Clarke for *your* floors.

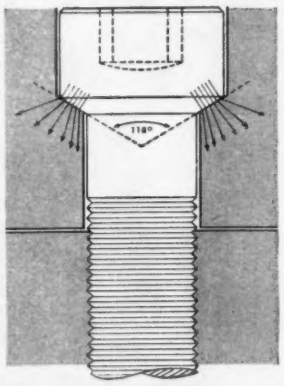
The new Clarke line includes sizes for every need—14", 15", 17" and 20" brush diameters. Other sizes also available. Buy Clarke — Clean with Clarke. Write for new brochure.

Clarke FLOOR MACHINE CO.
229 E. Clay Ave., Muskegon, Mich.

▲ For more details circle NED-769 J9 on enclosed inquiry slip ▲

new Mac-it IB
SOCKET HEAD CAP SCREW
provides a 26.53% improvement in working efficiency!

(Even over the new 1960 Series)



It's the taper of the new Mac-it IB socket head cap screw that adds 16.66% *more bearing surface* without an increase in head size. And there's 14.28% *less resultant compression* because of the change in direction of stresses.

It takes 12% to 23% more torque to release a Mac-it IB screw. That means it holds tighter. Indenting and corner fatigue are eliminated. And the new IB is self-aligning, tight-sealing, stronger, yet more streamlined. Conservatively rated, the Mac-it IB provides a 26.53% improvement in working efficiency.

YOUR MAC-IT DISTRIBUTOR will be glad to give you the facts on the new IB's right now; or *write for new, illustrated specifications bulletin.*

Mac-It Parts Co., Dept. 24, Lancaster, Pa.

MAC-IT ALLOY STEEL SCREWS

▲ For more details circle NED-770 J9 on enclosed inquiry slip ▲

Fast, simple way to palletize 100-pound multi-wall bags

These bags hold a starch adhesive. Could as easily be your powder or granular material. Base of the load is a Signode expendable paperboard pallet. Standard bag flattening procedure is used, with glue between tiers. The pallets—30" x 45" to 40" x 48"—handle six to nine tiers of bags—1,800 to 2,700 pounds. This pallet is made for hand truck use as well as fork trucks.

For more information send for Release #5.

Signode expendable paperboard pallets are strong—a 10-lb. pallet can support 6,000 lb.—light, clean, easy to handle, and less trouble than other types, and they cost less to use!

Let a Signode Pallet Licensee—*a dependable local supplier*—help you design a corrugated unit load that will give you maximum savings. We will be glad to put you in touch with one or more licensees near you. Just write Signode.

Sponsored by Paperboard Pallet Manufacturers
in cooperation with
SIGNODE STEEL STRAPPING CO.
Dept. SP, 2643 N. Western Ave., Chicago 47, Ill.

▲ For more details circle NED-771 J9 on enclosed inquiry slip ▲

New RMC High Pressure Gauge has pointer connected directly to pressure element

★ NO LINKAGES
★ NO PIVOTS
★ NO GEARS

Eliminates friction, wear and maintenance problems!

Revolutionary new multiple-turn bourdon coil makes possible direct pointer drive, without linkages, pivots or gears.

Pressure ranges from 0-1000 to 0-10,000 p.s.i. 3" and 5" dial sizes. (Also 1½" and 2" dial sizes in eccentric pivot-drive models.)

Write for complete information to:
ROCHESTER MFG. CO., INC.
114 Rockwood St., Rochester 10, N. Y.
INDUSTRIAL INSTRUMENTS

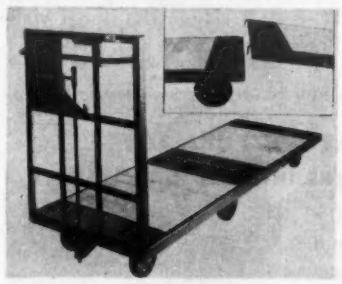
▲ For more details circle NED-772 J9 on enclosed inquiry slip ▲

DRAIN CLEANER is two-way force and suction pump

Stubborn clogged drains are easily cleared without dirt or mess with this two-way suction-force brass pump. More than 100 lb of pressure is alternated with suction to quickly loosen stoppages in drains, traps, and pipelines. The heavy duty 5½-in. diameter rubber cap is reversible for airtight fit into either open or strainer type drains to clear trap stoppages. Made by **Allan J. Coleman Co.**, 120 W. Illinois St., Chicago 10, Ill.

▲ For more details circle NED-775 J9 on enclosed inquiry slip ▲

SHOP TRUCK TRAILER designed for vertical articulation

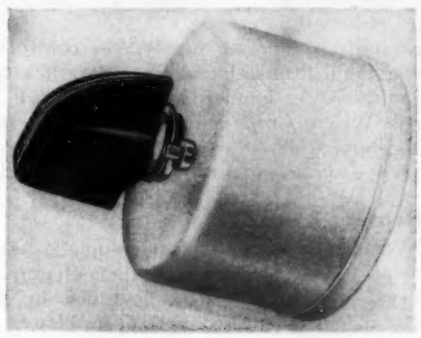


Two forward depending hooks on the trailer engage slots or holes in the rear of the TowKart industrial shop truck to form a smooth, flush deck. The connection is easily made. The trailer articulates vertically over uneven running surfaces without sideways movement. Made by **M-H Equipment Co.**, 707 Fabrication St., Dallas, Tex.

▲ For more details circle NED-776 J9 on enclosed inquiry slip ▲

POWER RHEOSTATS for explosive atmospheres

Metal-cased power rheostats are modified versions of series 25G and 50G (25 and 50-w) units to meet explosionproof requirements of MIL-E-5272A. Units



have many industrial applications, or wherever an explosive gas hazard is present. In tests, internal explosion was fully contained. Made by **Clarostat Mfg. Co.**, Dover, N. H.

▲ For more details circle NED-777 J9 on enclosed inquiry slip ▲

MOTORIZED LIFT TRUCK BATTERY CHARGER ELIMINATES SPECIAL WIRING

- No special wiring required.
- Plugs into a standard 15-ampere, 60-cycle, 115 v convenience outlet.
- Long, trouble-free life.
- Convection cooled, requires no maintenance.
- No aging adjustments required.
- Can be wall or battery mounted.
- Fully automatic; portable.
- For all 12-volt hand motorized lift truck batteries, up to 660 A.H.

Write for complete details in Bulletin AR-100.

C&D AutoReg® Silicon Chargers

A PRODUCT OF C&D BATTERIES, INC.
OF CONSHOHOCKEN, PA. . . . ATTICA, IND.

Manufacturers of Ryer-Cel® Industrial Batteries
Parkercell* and Parkercell® Batteries for Communications,
Control and Auxiliary Power • Producers of AutoReg® Silicon Chargers
*Trademark

▲ For more details circle NED-778 J9 on enclosed inquiry slip ▲

FICTION and FACT

FICTION: Paint Overspray Control Requires Complicated and Expensive Maintenance Procedure.

FACT: An RP Paint Arrestor Equipped Booth Can Be Changed In Minutes By Inexperienced Personnel.

RP PAINT ARRESTORS

Photo Courtesy Burnaby Blinds Ltd., Winnipeg, Canada

Inexpensive R P Paint Arrestors are easily replaced in a short time to provide like-new paint overspray removal efficiency, with minimum down-time, at a fraction of usual maintenance costs. Economical original installation, too—and adaptable to almost every type operation, R P Paint Arrestors can cut costs, increase production in your booths, too. Write for information.

Products of Research RP
RESEARCH PRODUCTS Corporation
Dept. 36, Madison 10, Wis.

▲ For more details circle NED-773 J9 on enclosed inquiry slip ▲

Wally the Witt says:
Here is the only can that pays you an OLD AGE PENSION!

That's right—because when ordinary cans reach the retirement age, Witt cans are still going strong, and that's when they start paying you dividends on your investment. You'll replace ordinary cans 5 times without replacing a Witt can even once!

Witt cans are rugged, heavy duty, straight side cans built of heavy gauge steel and hot-dip galvanized after fabrication. The result is, they're leak-proof, crush-proof, practically indestructible. So take advantage of the only available can pension plan—specify Witt.

"ORIGINATORS OF THE CORRUGATED CAN" WITT Cans
THE WITT CORNICE CO., 4468 STEEL PLACE, CINCINNATI 9, OHIO

▲ For more details circle NED-779 J9 on enclosed inquiry slip ▲

More capacity... size for size!

Crosby-Laughlin Load-Rated* Shackles

Designed to new safety standards

- Heat treated alloy pins
- Guaranteed capacity
- 50% stronger than ordinary shackles
- Safe working load forged in every shackle

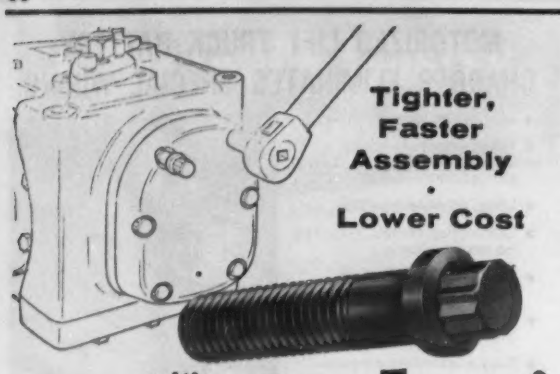
Stocked and sold by leading mill supply, construction and industrial equipment distributors.

Write for FREE specifications catalog listing the most complete line of drop forged fittings for wire rope and chain.
*Trademark

CROSBY-LAUGHLIN Division
AMERICAN HOIST & DERRICK COMPANY
FT. WAYNE, INDIANA

Manufacturers of Crosby Clips and "Load-Rated" Blocks . . . Crosby-Laughlin "Load-Rated" Fittings . . . Lebus Load Binders and Snatchblocks.

▲ For more details circle NED-774 J9 on enclosed inquiry slip ▲



with
countr-bor®
Screws

Tighter wrenching. No special tools needed. Fits flush in standard counterbored holes. Improves product appearance.

Save up to 20% on the screws alone and get greater holding strength.

Send for literature and samples of the sizes you wish to try.

FERRY CAP & Set Screw Company
2193 Scranton Road • Cleveland 13, Ohio

▲ For more details circle NED-780 J9 on enclosed inquiry slip ▲

With these 3 RIGID®
Jam-Proof Pipe Threaders
my power drive threading is Safe...
...no watching to keep them from jamming
...save me a lot of time, too!

1" to 2" Pipe RIGID 65R-TC
Jam-proof—can't jam if you forget it . . . Threads 4 sizes of pipe and conduit with 1 set of dies . . . True-Centering workholder—no more crooked threads—but adjustable for drip threads. Far more for your money—compare!

2½" to 4" Pipe RIGID 4PJ
Jam-proof . . . drive pinion kicks out automatically—real safety when power threading. Workholder sets to size before putting on pipe. Other exclusive advantages. Special 4PJ for conduit.

4" to 6" Pipe . . . RIGID 161
Jam-proof for safe power threading. 1 set of dies threads 4", 4½", 5" and 6" pipe and conduit—sets to size fast. Workholder sets to size before putting on pipe, a work-saver feature. Many other reasons why the 161 is your best buy!

See and try these popular RIGID Threaders . . . at your Supply House.

The Ridge Tool Company Elyria, Ohio, U.S.A.

THREADED PIPE . . . It's Tight . . . It's Best . . . Costs Less!

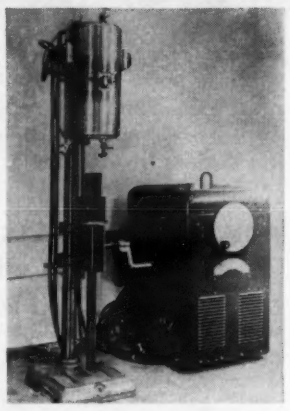
▲ For more details circle NED-781 J9 on enclosed inquiry slip ▲

EMERGENCY SHUT-OFF VALVE
fire and impact cause closure

Three - way emergency protection is provided by the single disc No. 9484 underpump valve for instant fuel shut-off in remote pumping systems. Upon severe impact, the cadmium shear neck will sever, causing the valve to close. Return to operating condition requires only replacement of an inexpensive adapter. Valve responds to fire and extreme heat through a fusible link which melts at 160° F. Protection against slight impact is achieved through an impact pin which has 360-degree sensitivity to impact. This pin is tripped by a sharp blow and is reset by hand. A ¼-in. NPT plugged opening permits pressure testing without breaking the line. Made by **Buckeye Iron & Brass Works**, Box 883, Dayton 1, Ohio.

▲ For more details circle NED-782 J9 on enclosed inquiry slip ▲

HIGH TEMPERATURE FURNACE
uses inert gas interior atmosphere



Operating up to 5000° F, this resistance furnace has a standard 4-in. diameter by 8-in. high heating chamber. Size can be varied to specific requirements. Furnace uses an inert gas for interior atmosphere, and has a graphite heating element and carbon insulation. Sighting tubes are installed at the top and side for temperature readings. Furnace is offered with or without automatic temperature controls. Power supply, gas control valves, pyrometers, and fittings for cooling make it a self-contained unit. Power input is 15 kw at 4500° F. Made by **Curtiss-Wright Corp.**, Santa Barbara Div., Box 689, Santa Barbara, Calif.

▲ For more details circle NED-783 J9 on enclosed inquiry slip ▲

Duct Heaters & Blowers

L. J. Wing Mfg. Co.—Efficient automatic heating in commercial and industrial applications is provided by line of gas-fired duct heaters described in Bulletin GD-100. Compact encased and open blower assemblies for use with Wing unit heaters are also covered. They offer a quick source of air for new or replacement systems. Dimensions, ratings, and performance data are given.

▲ For more details circle NED-784 J9 on enclosed inquiry slip ▲

SHADOGRAPH® gives you fast, precision weighing

Shadograph scales offer 50% greater speed than mechanical indicator scales and with visible weight you can read at a glance.
Ultra-visible readings are made possible by sharp shadow-edge indication on an illuminated dial. Parallax is impossible . . . friction is eliminated from indication system . . . and balance comes to rest more quickly. Shadograph scales, pioneered and developed by Exact Weight Scale Company, are available in 35 models with a range of capacities from 2000 milligrams to 100 pounds. Models are designed for production weighing as well as laboratory use. Write for Bulletin 3333.

Center Tower 4200 Models Shadograph

End Tower 4100 Models Shadograph

Exact Weight SCALES

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Sales and Service Coast to Coast

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930 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: 5 Six Points Road, Toronto 18, Ont.

BETTER QUALITY CONTROL...BETTER COST CONTROL

▲ For more details circle NED-785 J9 on enclosed inquiry slip ▲

small valves...big capacity...
fast cycling...low price

These Humphrey Valves are brand new in design and performance. Use them for valving air, oil, water, other liquids, gases, up to 125 psi. Also vacuum. Their big capacity, fast opening, quick exhausting, and smooth, positive action are like nothing you've ever seen before. Cycling speeds up to 30,000 per hour! Wide range of ⅛", ¼" and ½" models for manual, electric, piloted operation. 2-way, 3-way, 4-way types. Three methods of mounting—in line, manifold mounting, or new cartridge type for inserting internally in manifold. Readily engineered for OEM applications.
Write today for bulletin

Humphrey PRODUCTS DIVISION
DIVISION GENERAL GAS LIGHT CO.
Kalamazoo, Michigan

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Choose the *RIGHT* Speed Reducer for every job... *EVERY TIME*

Get this pocket-size engineering data book and complete catalog.

The handiest speed reducer guide available. Gives answers to ratios, horsepower, application, shock load, space, shaft position, etc.

Write, wire or phone today. No obligation.

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▲ For more details circle NED-787 J9 on enclosed inquiry slip ▲

Cuts Bending Costs
AS MUCH AS
50%
• NEW PINES 3T PRESS •

Makes Bends Progressively To Varied Angles In Multiple Planes

Quality bends at production speeds that are 2 to 3 times faster than conventional methods, are now possible with the new Pines 3-T Bending Press. Many tubular parts in sizes ranging up to 1" O.D. are now formed at net speeds in excess of 1000 bends per hour. Up to 9 different bend angles can be produced in a single setup. Adjustable automatic indexing stops accurately control depth of ram stroke. Open tooling area permits rapid progressive bending in varied planes. High production speed is just part of the story. Unusually smooth, good looking bends are also produced to meet the quality demands of automotive, furniture, toy, office equipment, and appliance manufacturers. Wing dies are designed to move in ways as a bend is made, and their pivoting action is hydraulically cushioned through bearing-mounted rocker arms. This principle eliminates scratches or draw marks and produces wrinkle-free bends with very little distortion.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 607 WALNUT • AURORA, ILLINOIS

FREE DATA SHEETS
Get the complete cost cutting story on this Press today. Larger models for tubes to 2" O.D. available.

PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

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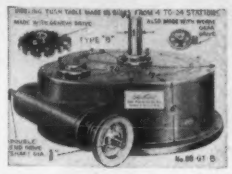
EISLER

FOR 39 YEARS

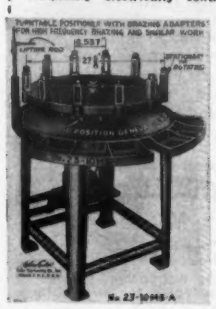
We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES
MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
- For work transferring, tilting positions. . Motorized or hand operated.



Eisler Indexing Turntables are completely electrically controlled



AND CAMS MADE TO YOUR SPECS!

"Ask for catalog 88-57"

EISLER ENGINEERING CO., INC.
740 SO. 13th ST., NEWARK 3, N. J
Charles Eisler, Jr., President

▲ For more details circle NED-789 J9 on enclosed inquiry slip ▲

NEW
Oiltight Pressure Switch

For Operating Pressure Up to 5000 PSI

A-B QUALITY

BULLETIN 836
TYPE T
Compact construction designed for machine tool service.

Especially designed for heavy duty industrial applications, these new A-B oiltight high pressure switches assure long life and trouble free operation. The neat, die-cast aluminum enclosure is sealed to exclude oil and water. Both the range and differential are adjustable. The range is externally adjustable, and a trip indicator shows the operating point. The snap-action switch mechanism maintains its high contact pressure to the point of switchover—no matter how slowly it is approached—thus eliminating contact chatter. The contact block has isolated N.O. and N.C. contacts. Send for complete information.

Internal view of piston design used on units for systems above 500 psi. Bellows type construction is used up to 500 psi.

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
Member of NEMA
Quality MOTOR CONTROL

▲ For more details circle NED-790 J9 on enclosed inquiry slip ▲

MARKING PENCIL
writes any size, on any surface

Slim and convenient to use, the all-purpose Mars-Omnichrom marking pencil makes both fine and heavy markings on practically any surface. Pencil is sharpened in an ordinary pencil sharpener to the size point desired and is available in red, blue, green, yellow, brown, white, and black colors. Made in Germany, pencil writes on glass, pottery, enamel, metal, glossy prints, plastic, cellophane tape, stone, rubber, tile, stainless steel, and other difficult-to-mark surfaces. Markings are easily removed with a damp cloth. Offered by **J. S. Staedtler, Inc.**, 646 DiCarolis Court, Hackensack, N. J.

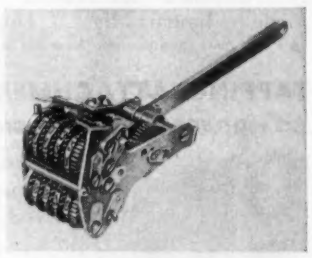
▲ For more details circle NED-791 J9 on enclosed inquiry slip ▲

INSULATED LOCKOUT
protects workers on electrical jobs

Full protection to two or more men working on electrical power switch lines is provided by the Safety Multiple Lockout, made of 3/16-in. laminated Bakelite. Each workman is supplied with his own padlock which is inserted in any of the seven positions provided. When the last lock is removed from the multiple lockout, the line can then be closed and the power turned on. Made by **Dayton Rogers Mfg. Co.**, 2824 13th Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-792 J9 on enclosed inquiry slip ▲

READ-OUT COUNTER & PRINTER
records positive, negative numbers



Digital data ranging from plus to minus numbers and vice versa are continuously printed by this direct read-out swinging head counter. Unit is rated at 9000 counts per minute, with printing speed of 3 per second. Numerical values and symbols are printed directly in a parallel line on tape, card, or other output media. Unit has two sets of four-digit print wheels, with both positive and negative set printing out digits from 0001 to 9999. Although device is shaft-driven, it will accommodate pulse inputs of 720 per minute. Made by **American Electronics, Inc.**, American Data Div., 75 Front St., Brooklyn 1, N. Y.

▲ For more details circle NED-793 J9 on enclosed inquiry slip ▲

Cut ANY Shape in Metal...
with a BEVERLY THROATLESS SHEAR!

- Capacities to 3/16" in mild steel
- Make clean, knurl-free cuts in any metal to capacity
- High Carbon High-Chrome Blades
- Built to last a lifetime

Here's What a Beverly Can Do!
Cuts made in .18 ga. metal with Model B-1

Model B-3 with Ball Bearing Hold Down

Beverly Shears are the most versatile metal shearing tools you can use. Unique shoulder design permits any cut . . . rack and pinion gives great power with little effort. Alloy steel body for maximum rigidity and strength. Made in 4 models.

Write for illustrated circular —or see your Beverly Distributor.

Beverly SHEAR MFG. CO.
3016 W. 111th Street Chicago 43, Ill.

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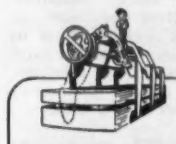
1 man handles Sheet Steel Faster, Easier with a C-F LIFTER

C-F Lifters, under one man operation, pick up, carry and unload more sheet steel tonnage per hour than any other method – and at lower cost per ton. Wide carrying angles hold sheets securely – won't damage high grade sheets; tong action insures safe carrying; fast opening and closing adjustments of Lifter jaws permit shifting from one size pack to another in seconds. C-F Lifters are made in standard or semi-special models to handle from 2 to 60 tons.



Write for Bulletin SL-30 for specific examples of C-F Lifter operation and economy.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

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LOW COST INCINERATOR

BURNS TRASH SAFELY OUTDOORS

Only $110.00 COMPLETE

NO INSTALLATION COST

Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only $110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

Write for **FREE** *Folder*

ALSTO COMPANY
Dept. NE-14 4007 Detroit Ave. Cleveland 13, Ohio

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Free "ideas" booklet . . .

VINYL COATINGS

new products! . . . new ways to up-grade established products!

See how good looking vinyl coatings add new sales appeal, usefulness, durability to consumer and industrial products. Easy to apply on wood, metals, fiber, glass, paper. Dip or spray. Any color. Variety of textures. Potential largely unexplored.

For Free 17-page Illustrated Booklet: Use publication's inquiry card, or mail coupon direct to: Monsanto Chemical Company, Organic Chemicals Division, Dept. PL-20, St. Louis 66, Mo.

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Company _____
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NEW HI-VI VIBRATORY FEEDER BY ERIEZ OFFERS MANY ADVANCED FEATURES!

- **Totally - enclosed drive element**
- **Rustproof, long-life spring**
- **No rectifier needed**
- **More uniform feed**
- **Greater capacity than comparable physical size unit.**

(Pat. Pending)

Improved line of HI-VI electro-permanent magnetic vibratory feeders operate at 3600 CPM directly off an AC line—need no rectifier. Totally-enclosed drive element can't be damaged or lose efficiency due to contamination by moisture or foreign materials. Disc-shaped, glass fiber springs are rustproof; not subject to critical characteristics of steel leaf spring systems. And these new units provide greater capacity than any other comparable size feeders.

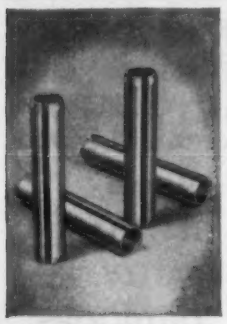
HI-VI Feeders provide a liquid-like flow to all types of bulk materials, variable from ounces to tons per hour. Units are lightweight, compact, easily installed. Almost silent operation; no sliding or rotating parts to wear. Low operating and maintenance costs. Lifetime-powered Alnico V magnet is the heart of the unit.

ERIEZ HI-VI VIBRATORY EQUIPMENT

Magnetic SEPARATION AUTOMATION VIBRATION equipment

For complete information on HI-VI Feeders, write to **Eriez Mfg. Co.,** 80-WB Magnet Dr., Erie, Pa.

▲ For more details circle **NED-798 J9** on enclosed inquiry slip ▲



Cut fastening costs, save assembly time with SEL-LOK spring pins

Drill an ordinary-tolerance hole; drive a SEL-LOK—with hand tools or automatic assembly fixtures. That's all there is to installing these slotted tubular pins that lock by spring action. They will not work loose, yet can be removed and reused repeatedly. SEL-LOK spring pins eliminate costly tapping, reaming, peening and milling operations, as well as the rejects associated with close tolerances. They simplify design, save assembly time in countless applications . . . as keys, axles, cotter pins, hinge pins, stop pins or pivots . . . in metal assemblies or in products of nylon, Bakelite, hard rubber or fiber. Your SEL-LOK distributor stocks spring pins in carbon steel (plain or cadmium plated), corrosion-resistant steel and in beryllium copper. See him for complete details or write direct for Bulletin 2331 and samples.

INDUSTRIAL FASTENER Division **sps**

JENKINTOWN 24, PENNSYLVANIA

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Maintains Accurate Web Register Within Plus or Minus .010 Inch!

World's most efficient, economical side register control! Unique Stanford vacuum principle instantly, accurately corrects any change in web path. Eliminates telescoped and out-of-register rolls . . . prevents spoilage . . . permits full-speed operation.

Saves Big Money on Coating, Slitting, Printing, Laminating, etc.—any operation, any material, any width.

Unconditionally Guaranteed!

30-Day Test Trial in Your Plant—Write, Wire or Phone for Details!

Stanford ENGINEERING COMPANY
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Mfrs. of Slitters, Web Guides, Rewinding and Constant Tension Equipment

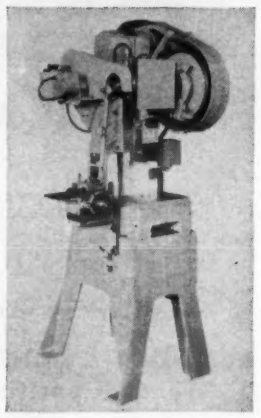
▲ For more details circle **NED-800 J9** on enclosed inquiry slip ▲

ULTRASONIC CLEANER combines high and low frequencies

Simultaneous operation at both high and low frequencies enables the Model VT-700 ultrasonic cleaner to perform a wide range of cleaning. It operates at 400 kc to remove dirt particles around 1 micron in size and penetrates into small crevices and recesses, and at frequencies down to 20 kc to remove larger dirt particles and clean inaccessible areas. High frequency cleaning fills the entire container, allowing parts to be loosely stacked. Ultrasonic wash, ultrasonic rinse, and drip dry complete the cleaning system. The 12-in. diameter by 12-in. deep containers have a 24-qt capacity. Unit is built of stainless steel. Made by **McKenna Laboratories,** 2503 Main St., Santa Monica, Calif.

▲ For more details circle **NED-801 J9** on enclosed inquiry slip ▲

HIGH SPEED PRESS fabricates small precision parts



Operating at 450 to 900 strokes per minute, this high speed bench press has a capacity of 5 tons. It has a ⅜-in. eccentric stroke, shut height of 8 in., and incorporates an automatic lubricating system. Press is driven by a 1½-hp ball bearing motor for the fabrication of small precision parts. Additional features are a choice of a dovetail slide or a round shank hole, counterweighted shaft, and V & O electrically controlled air clutch. Made by **Emhart Mfg. Co.,** Hudson Div., Hudson, N. Y.

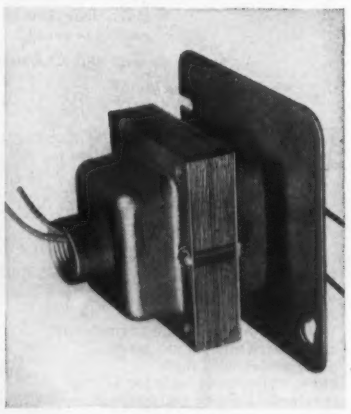
▲ For more details circle **NED-802 J9** on enclosed inquiry slip ▲

TAPPING ATTACHMENT operates continuously at 2500 rpm

Consistently perfect threads can be produced by minimum skilled operator without danger of tap breakage with the Tapmatic 300A tapping attachment. It features an axial floating drive spindle and a supersensitive spring loaded ball clutch, and is capable of continuous operation at speeds up to 2500 rpm. Driving torque is adjusted prior to tapping and cannot be changed during operation. Tap stops instantly when it becomes dull, loaded, or bottoms in a blind hole. Capacity in mild steel is from No. 00 to 10-24 threads. Made by **Tapmatic Corp.,** 845 W. 16th St., Costa Mesa, Calif.

▲ For more details circle **NED-803 J9** on enclosed inquiry slip ▲

CONTROL TRANSFORMERS attach directly to raceways

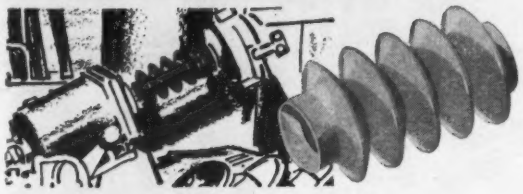


Any standard Hindle control transformer can be equipped with electrical conduit and cable fittings for direct attachment of any standard raceway. Standard fittings, couplings, insulated connectors, and regular female threaded hubs for flexible and rigid conduit, portable cord, sheathed cable, EMT, and interlocked armored cable are offered for conduit sizes up to 1 in. Company also makes the transformers in special sizes and dust and moisture-proof containers. Made by **Hindle Transformer Co.,** 35 Woods Church Rd., Flemington, N. J.

▲ For more details circle **NED-804 J9** on enclosed inquiry slip ▲

MINNESOTA MR RUBBER

PLASTISOL A NEW MATERIAL FOR INDUSTRY



Plastisol or Polyvinyl Chloride has many characteristics that make it desireable for industrial use. For example it has good dielectric qualities that are needed in electrical installations; it resists the corrosive action of acids and fertilizers; it has an extremely long life when exposed to abrasives; it is non-toxic; and finally, parts made from it can be manufactured very economically because expensive tooling is not required!

The list of uses for Plastisol is growing daily. It could be the material you have been searching for.

FOR MORE INFORMATION AND A COPY OF THE PLASTISOL HANDBOOK . . .

WRITE DEPARTMENT 636

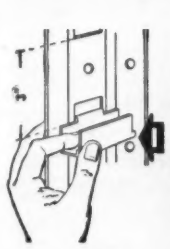
MINNESOTA MR RUBBER
3630 WOODDALE AVENUE MINNEAPOLIS 16, MINNESOTA

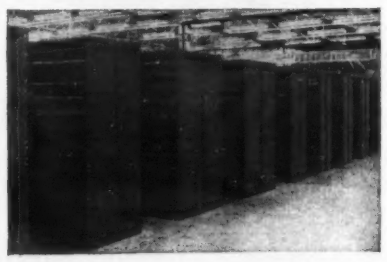
▲ For more details circle **NED-805 J9** on enclosed inquiry slip ▲

gentlemen, it's RUGGED BORROUGHS STEEL SHELVING

it's your best buy because

● It is nationally recognized as the most simple, most flexible, most rapidly assembled shelving on the market. ● Borroughs' exclusive Shelf Support Brackets make the installation or rearranging of shelves a finger-tip operation. ● Except for the top shelf (2 bolts and 2 nuts), no other bolt or nuts are required for Borroughs shelves. ● No special tools are needed to assemble units—and any unit or shelf can be moved independently. ● There are many more outstanding features that you should know about—so write for full details today.





Insert 4 shelf support brackets . . . no fumbling with studs, bolts, nuts or lock washers.

and then

Tilt shelf into support brackets . . . and shelf is ready for loading.

This Shelf Support Bracket is tops in the industry!

send for catalog Represented in Sweet's Catalog, Plant Engineering File 4G BO

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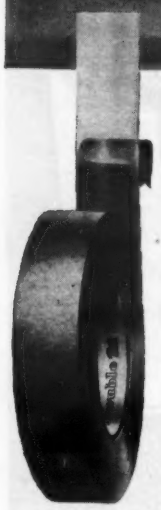
A SUBSIDIARY OF THE AMERICAN METAL PRODUCTS COMPANY OF DETROIT

3072 NORTH BURDICK ST. amp KALAMAZOO, MICHIGAN

▲ For more details circle **NED-806 J9** on enclosed inquiry slip ▲



PRESSURE SENSITIVE TRANSFER FILM

An instant bonding medium for the temporary or permanent bonding of a full variety of porous and non-porous materials. Double-Face is a translucent adhesive film reinforced by a non-woven tissue and supported for shipping handling and storage by a release-coated protective paper. More versatile than a single or double coated tape.

- 72 linear yard rolls in widths ⅜" up to 54"
- Conforms to irregular surfaces
- Permits better bond of porous surfaces
- Can be slit or die cut with release paper in place
- High-speed applicator available
- Dry-edge release paper available in some widths

Write for free literature and sample.

ANGIER ADHESIVES
INTERCHEMICAL CORPORATION
Finishes Division
120 Potter St., Cambridge 42, Mass. Midwestern Plant: Huntington, Indiana

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GREENLEE AUTOMATICS

SAVE YOU
✓ **MONEY**
✓ **MAINTENANCE**

Lead-screw threading and tapping attachments for Greenlee Automatics make it easy to thread parts otherwise impractical for automatic bar machine operations. Smooth, precision threading with excellent finish make this type of operation profitable for you. Write for Catalog A-405.

GREENLEE
GREENLEE BROS. & CO.
1796 MASON AVENUE
ROCKFORD, ILLINOIS

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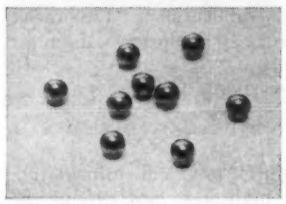
New Processes and Materials

PLASTIC METALLIC PACKING
withstands water, steam, acid, oil

Suited for high pressure service and temperatures up to 700° F, Lonsor plastic metallic packing never hardens or deteriorates. Supplied in 1-lb wrapped cakes, required amount is easily broken off and stuffed in the box, gland, or shaft by hand. Because it is pliable, it conforms to contour of rod or shaft and makes a good bearing surface. Antimony content affords self-lubricating low-friction bearing qualities. It is impervious to water, steam, acid, and oil, and can be used in valves, stuffing boxes, cylinders, pump glands, and other applications for long, leakproof service. Distributed by **Newage Industries, Inc.**, 222 York Rd., Jenkintown, Pa.

▲ For more details circle NED-810 J9 on enclosed inquiry slip ▲

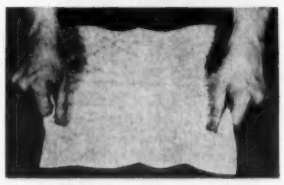
SOLDER BALLS
facilitate automatic feeding



Tin-lead, indium, silver, precious metal, and fusible solder alloys are now available in ball form to facilitate automatic feeding to point of use. Available in diameters from 0.002 through 0.125 in. and accurate to ±0.001 in., spheres assure a correct volume of solder. Balls are competitively priced. Made by **Alloys Unlimited, Inc.**, 21-01 43rd Ave., Long Island City 1, N. Y.

▲ For more details circle NED-811 J9 on enclosed inquiry slip ▲

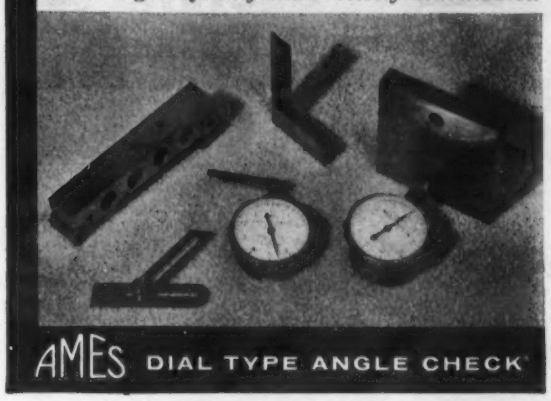
INDUSTRIAL WIPER
disposable nonwoven cotton type



Nonwoven bonded cotton from which this disposable industrial wiper is made is reportedly as strong, absorbent, and lint-free as woven cotton, yet is competitive in price with paper wipers. Fabric has high wet strength and can be used with gasoline, carbon tetrachloride, waxes, polishes, water, soap, and oils. Although disposable, wiper can be re-used several times. Samples offered by **B. H. Jordan Co.**, 64 E. Eighth St., New York 3, N. Y.

▲ For more details circle NED-812 J9 on enclosed inquiry slip ▲

Check Angles Quickly and Precisely with the New



ANGLE CHECK, a new dial type measuring instrument, offers you a fast, low cost, extremely accurate method for checking angular parts.

There are two ANGLE CHECKS: Model V for vertical work; Model H for horizontal. Either model takes AMES 200 Series backs. Contact blades are available in various shapes and lengths.

Ruggedly built, ANGLE CHECK saves hours in checking angles on simple and intricate shapes.

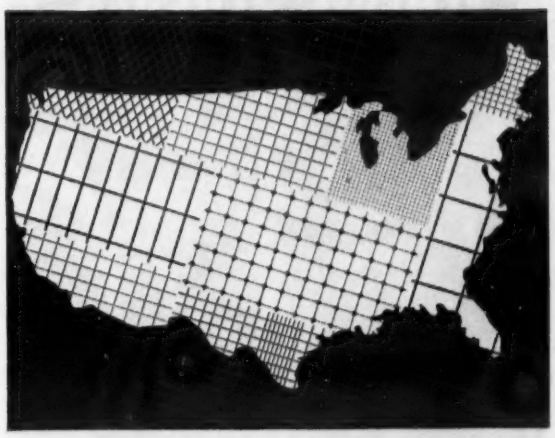
The contact blade can be set to a predetermined angle with the dial "0" under the indicator hand. A range of 5°—plus or minus—in increments of 5' can be obtained. ANGLE CHECK is accurate to 5'. Write today for complete information.

Representatives in Principal Cities

B.C. AMES CO.
34 Ames Street, Waltham 54, Mass.
Canadian Office—B. C. Ames Co., 45 Oriole Parkway, Toronto
MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAUGES

▲ For more details circle NED-813 J9 on enclosed inquiry slip ▲

For the finest service available on industrial wire cloth



. . . come to

Cyclone Fence

To meet your needs for industrial wire cloth . . . assure you prompt, efficient service Cyclone Fence maintains 85 sales offices and 30 warehouses—strategically located all across the United States. Wherever your plant is located, there is a Cyclone office near. A phone call to this office will put a trained, experienced Cyclone representative at your service.

Before you place another order for industrial wire cloth, get in touch with Cyclone. No other company in the industry can match Cyclone's service program.

USS **Cyclone Industrial Wire Cloth:** Meshes vary from ¾ inch to 24 wires per inch. Warp and shoot wires can be varied to provide rectangular spacing or panel and rib weaves. Wire gauges range from 14 gauge to 36 gauge. Wire cloth can be slit and cut to length according to your exact requirements.

• Plain Steel • Painted Steel • Hot Galvanized After Weaving • Electro Galvanized After Weaving • Amgal (Galvanized Before Weaving) • Stainless Steel • Aluminum • Commercial Bronze • Plastic Coated Steel

USS and Cyclone are registered trademarks

Cyclone Fence Dept. American Steel & Wire Division of USS **United States Steel**

Manufactured at De Kalb, Illinois · Sales Offices Coast to Coast

Cyclone Fence Dept., American Steel & Wire
55-99, 614 Superior Avenue, N. W.
Cleveland 13, Ohio

Please send me a free copy of your new catalog on USS Cyclone Industrial Wire Cloth.

Name .....
Address .....
City ..... Zone.... State.....

▲ For more details circle NED-814 J9 on enclosed inquiry slip ▲

YOURS FOR THE ASKING!

Free samples and complete technical data on the new **W-POINT SOCKET SET SCREW** *by* **PARKER-KALON®**

Test for yourself, the revolutionary new socket set screw that gives you the highest degree of holding power ever attained . . . *at no increase in price!* See for yourself how the new, cleaner, far more uniform tracking of the cup edge and more extensive contact area provides . . .

30% MORE BACK-OUT TORQUE
50% MORE RESISTANCE TO VIBRATION
50% MORE RESISTANCE TO ROTARY SLIPPAGE

Write today for test samples and Technical Bulletin No. 1106

PARKER-KALON, a division of General American Transportation Corporation, Clifton, N. J. • Offices & Warehouses in Chicago and Los Angeles. Look to Parker-Kalon for a complete line of Socket Screws . . . to fulfill every requirement. Available through Industrial Distributors coast to coast.

▲ For more details circle NED-809 J9 on enclosed inquiry slip ▲

Six sizes . . . all variable speed, explosion-proof

GAST AIR MOTORS

Need compact, low cost power? For plant use and original equipment applications, Gast rotary-vane Air Motors offer these distinct advantages:

1. Explosion-proof power. No danger!
2. Low initial cost per rated h.p.
3. Variable speed with valve control.
4. Can't burn out from overloads.
5. Vanes take up their own wear.
6. Reversible rotation (opt.) 5 sizes.
7. Very compact — light in weight.
8. Top-quality ball-bearing design.

TYPICAL PERFORMANCE

Model No.	H.P. at 90 PSI 2000 RPM	Weight lbs.
1AM	0.13	1½
2AM	0.57	5½
4AM	1.1	8
6AM	2.0	17
8AM	4.0	25
16AM	7.0	65

Gast Manufacturing Corp. *Write for Bulletins — specify models!*
P.O. Box 117-R
Benton Harbor, Mich.

GAST ROTARY
• AIR MOTORS TO 7 H.P.
• COMPRESSORS TO 30 P.S.I.
• VACUUM PUMPS TO 28 IN.
"Air may be your answer!"

▲ For more details circle NED-817 J9 on enclosed inquiry slip ▲

NEW RAYMOND ELECTRIC WALKIE STACKER

OPERATES ON 24 VOLT POWER

Cut pallet handling costs down to a profitable size!

RAYMOND's new Walkie Stacker does the same job as a rider type tiering truck . . . yet costs half as much . . . enabling plants and warehouses to enjoy an economical pallet handling operation. Tiers 2,000 lb. pallet loads 10 feet high from narrow 6½ foot aisles. Simple to operate in transporting or stacking . . . exclusive safety feature eliminates need for special driver training. Complete with batteries and charger at one low price. Investigate the cost-saving possibilities of RAYMOND's new Walkie Stacker in your own operation . . . send for FREE bulletin TODAY!

Ask about lease rental and deferred payment plans

CLIP AND MAIL COUPON TODAY!

The RAYMOND CORPORATION
4182 Madison Street, Greene, N. Y.
☐ Send New Walkie Stacker Bulletin
☐ Send Walkie Low Lift Bulletin

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-818 J9 on enclosed inquiry slip ▲

New Literature and Catalogs

Adjustable Speed Drives

Cleveland Worm & Gear Co., Speed Variator Div.—Eight different adjustable speed and drive control problems in as many industries are discussed in Bulletin K-250. All were solved with the application of Speed Variator units, offered in 18 sizes from ½ to 16 hp. Stepless speed control is in 9:1 and 6:1 ranges. Many applications are listed.

▲ For more details circle NED-819 J9 on enclosed inquiry slip ▲

Roller Bearings

Orange Roller Bearing Co.—Construction, dimensions, capacities, and housing and tolerance fits for extensive line of Orange roller bearings are contained in 48-page Engineering Reference Manual M-59. Covered are staggered roller, full needle, cage needle, journal roller, and thrust roller bearings, and cam followers and cam yoke rollers.

▲ For more details circle NED-820 J9 on enclosed inquiry slip ▲

Rhodium Electroplating

Sel-Rex Corp.—Unique metallurgical properties of rhodium are related in 20-page illustrated booklet "Rhodium Electroplating Processes." It tells when, where, and how to use this plating in electrical, electronic, and other industrial applications. Decorative uses are discussed, and technical application data are included.

▲ For more details circle NED-821 J9 on enclosed inquiry slip ▲

Chain Drives

Chain Belt Co.—Up-to-date, practical information on how to install, operate, maintain, and extend the life of your chain drives is contained in pocket-size Bulletin 59126. The do's and don't's the experts follow are presented.

▲ For more details circle NED-822 J9 on enclosed inquiry slip ▲

Books for the Metal Industry

American Society for Metals—Almost 100 technical books on many subjects of interest to those in the metal industry are briefly reviewed in a folder. They run the gamut of basic metallurgy, testing, fabrication, heat treating, steelmaking, corrosion of metals, and other subjects.

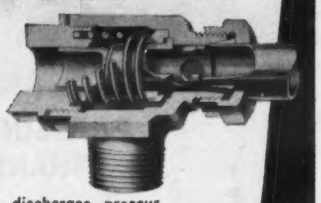
▲ For more details circle NED-823 J9 on enclosed inquiry slip ▲

Mills & Counterboring Tools

Genesee Mfg. Co.—Adjustable hollow mills for cutting steel, cast iron and nonferrous metals; facing and counterboring tools; and special production and tube deburring tools are descriptively treated in four sections of 48-page Catalog 60. Photos depict tools in the production of various automotive, aircraft, and other parts.

▲ For more details circle NED-824 J9 on enclosed inquiry slip ▲

split-second air dumping with... FAWICK quick release valves

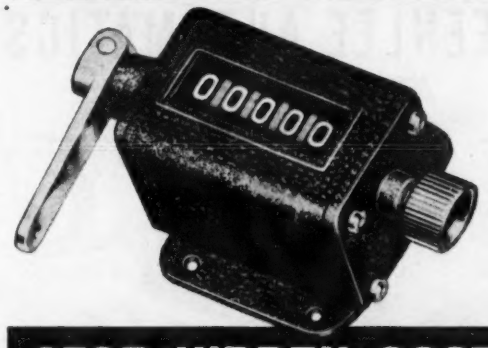


• Instantaneously discharges pressurized air from any pneumatic pressure system
• Fast, positive valve actuation by pressure differential
• Precision built, self cleaning, never needs lubrication
• Available in ⅜" to 1" sizes (outlet pipe thread)

Specify them for "quick-release" of pressurized air.

FAWICK AIRFLEX
FAWICK AIRFLEX DIVISION
FAWICK CORPORATION
9919 Clinton Rd., Cleveland 11, Ohio
In Canada, Fawick Canada, LTD., Toronto

▲ For more details circle NED-826 J9 on enclosed inquiry slip ▲



STOP "HIDDEN" COSTS with this V-R Reset Counter

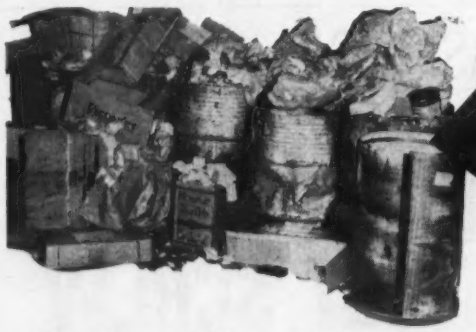
A compact, rugged reset counter for *count*rolling all types of production, machine movements, assembly operations and quality control. Saves on overages, breakdowns, delays, shortages. *Count*rols production and wage and incentive payments.

Attaches easily to most any machine, and is available in ratchet or revolution mechanisms.

Start *Count*rolling Now! Veeder-Root mechanical and electrical Counters are available from your local Industrial Distributor or nearest V-R office.

Veeder-Root INC.
Hartford 2, Connecticut
"The Name that Counts"

▲ For more details circle NED-827 J9 on enclosed inquiry slip ▲

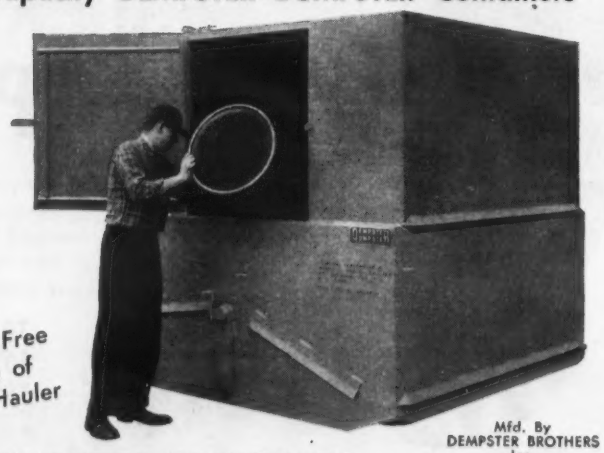


Patented

End... Unsightly Refuse Piles ... Dangerous Fire Hazards

Store Your Plant Waste in Clean, Big-Capacity DEMPSTER-DUMPSTER Containers

Eliminate unsightly trash piles . . . dangerous fire hazards . . . store your plant's waste and refuse in clean, big-capacity, all-steel containers. You'll save real money by automatically collecting it and hauling it to the disposal area with one man operated DEMPSTER-DUMPSTERS . . . just like thousands of America's leading firms do. Our free 40-page book tells how — write today for your copy!



DEMPSTER DUMPSTER® SYSTEMS

Write Today for Free Booklet or Name of Nearest Private Hauler

Mfd. By DEMPSTER BROTHERS Inc.

Dept. NE9 DEMPSTER BROTHERS, Knoxville 17, Tenn.

▲ For more details circle NED-825 J9 on enclosed inquiry slip ▲

Hardness Readings in 2 seconds!

Webster PORTABLE **Hardness Testers** FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

MODEL B Direct hardness readings on all aluminum alloys.

MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

WEBSTER INSTRUMENTS, INC. Dept. N, 11856 Mississippi Ave. Los Angeles 25, California

▲ For more details circle NED-828 J9 on enclosed inquiry slip ▲

Speed Tying Operations!

★ Cheaper than String
★ Faster than Tying
★ Sure Grip
★ Colorful

NO KNOTS TO TIE!

Cut your tying time in half! Hanscom-Ties are the fast, sure way to bundle wires, cords, coils, etc. Nothing to tie. Just wrap 'em around and twist. For temporary or semi-permanent holding. Available in cut lengths 1" to 24" and on spools — bright colors or printed. Prices from 26c per thousand. WRITE FOR SAMPLES and TRY 'EM YOURSELF.

H.F. Hanscom & Co., Inc.
15 Virginia Avenue
Providence 5, R.I., U.S.A.

Top view of Hanscom-Tie is shown. Bottom is flat

Hanscom-Ties

▲ For more details circle NED-829 J9 on enclosed inquiry slip ▲

Facts on flex and expansion joints . . . that can save you maintenance and expenses are detailed in this bulletin. Send for your copy. Write Dept. 308, RESISTOFLEX CORPORATION, Roseland, N. J.

▲ For more details circle NED-830 J9 on enclosed inquiry slip ▲

New Processes & Materials

LAYOUT FLUID in spray cans

Pressurized spray can simplifies application of Reynolds layout fluid and minimizes waste and evaporation. Fluid dries quickly, leaving a dull nonglare even coating that will not rub off. Dark purple fluid scribes readily for high-contrast layout on metal and other materials. Offered by **Reynolds Ink, Inc.**, 4500 Euclid Ave., Cleveland 3, Ohio.

▲ For more details circle NED-831 J9 on enclosed inquiry slip ▲

TRANSPARENT CEMENT bonds rubber and plastic foams

Rubbaseam multipurpose cement can be applied by brush or machine for bonding rubber, polyurethane, vinyl, and polyether foams. Drying in minutes, it forms a transparent, nonstaining, permanently flexible bond for fabricating, laminating, and adhering foam to fabric, wood, and leather. It can be used also to apply foam toppers to curled hair and jute. One and five-gallon cans and 55-gal drums are offered. Made by **Rubba, Inc.**, 1015 E. 173rd St., New York 60, N. Y.

▲ For more details circle NED-832 J9 on enclosed inquiry slip ▲

INORGANIC ZINC COATING provides galvanic protection

Conductive zinc film formed by application of Carbo Zinc No. 11 all-inorganic zinc coating provides direct galvanic protection to steel surfaces, as the reactive metal slowly goes into solution as needed when immersed. It eliminates subfilm rusting in salt and fresh water and solvent environment, and is effective from −80 to 750° F. Application is by brush, roller, or spray. Coating becomes water insoluble 20 min after application. It can be used as a single protective coating, or as a prime coat for other coatings. Made by **Carboline Co.**, 32 Hanley Industrial Court, St. Louis 17, Mo.

▲ For more details circle NED-833 J9 on enclosed inquiry slip ▲

Ask your mill supply house or Maxwell salesman or write today for CATALOG BB-159

Greater accuracy, more work in less time, longer tool use—you get them all with Maxwell's new Mastur Boring Head line.

Adjustable to 0.0001-inch, Maxwell's new improved boring tools feature an adjusting-screw head graduated for readings in thousandths, with body having vernier readings of 0.0002-inch. Four standard models for tools ⅜" to 1" diameter, and up to 3" in specials. Boring range from ⅜" to 15". AA-9872

MAXWELL INDUSTRIES, INC.
493 East 5th Avenue • Ashtabula, Ohio

▲ For more details circle NED-834 J9 on enclosed inquiry slip ▲

SUPERVISES ITSELF

Model 62 Stretcher for heavy-duty flat strapping

With the Model 62 Torque Handle Stretcher you pre-set a desired tension quickly. You read the tension setting on the built-in precision indicator. When the strap has been tightened and the set tension is reached, a loud click tells you so. There's no guessing, no need for a supervisor to check every strap. Built-in shears clip quickly, neatly—finish the job.

TECHNICAL ADVICE is available from our strapping specialists to help with your packaging problems. Write for information and a copy of our Sweet's Catalog insert. *USS is a registered trademark*

Complete Strapping Service
Strapping • Tools • Technical Assistance

U. S. Steel Supply Division of USS United States Steel

Steel Service Centers and Complete Steel Strapping Service Coast to Coast
USS Steel Strapping formerly Gerrard Steel Strapping

▲ For more details circle NED-835 J9 on enclosed inquiry slip ▲

How you use material *after* you cut interests Wallace as much as does the alloy, or size or the shape you cut. If, after the cut, you need smooth cut ends, free of burn, and nearly burr-free, then Wallace Cut-Machining is definitely *your* type of cutting.

For Wallace Abrasive Cut-Machining Units give your material two smooth "machined-like" ends with the first cut. Often no further end-machining is needed. Here is economy with every cut of solid bars, structurals, small and "big-inch" pipe and tubing, any alloy. The right Cut-Machining Unit for your special requirements can be quickly determined at no cost or obligation to you.

So? Let's discuss your cutting problem. Write, or

Call Wallace Collect Lee

Chicago number: BUckingham 1-7000

Ask for CUTTING CLINIC *and reverse charges, please!*

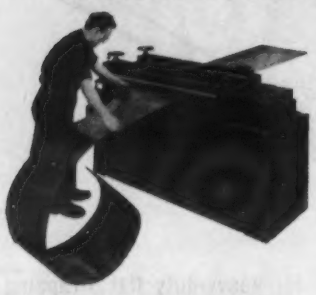
THIS BOOKLET shows you how Cut-Machining solves other cutting problems. Be sure to ask for it. It's free.

Write, if you prefer, to

WALLACE SUPPLIES MFG. CO.
1312 W. Wolfram Street • Chicago 13, Illinois

▲ For more details circle NED-836 J9 on enclosed inquiry slip ▲

The best sheet metal ROLLER LEVELER we've ever built!



WOEHR ROLLER LEVELERS

(in several standard models) flatten steel, aluminum, brass and copper in widths up to 60" . . . in gauges .010 to .125! Your fabricating capacity and efficiency are increased *immediately!* Safe, one-man operation is simple and accurate.

Send for FREE BOOKLET. Our brochure gives complete specifications and data. Write for your copy TODAY.

f.a. WOEHR machine co.
70 FAVOR STREET • ROCHESTER, NEW YORK

▲ For more details circle NED-837 J9 on enclosed inquiry slip ▲

Stop Oil Leaks!

Without draining lines or equipment

Users' Reports Tell How OYLTITE-Stik can help you

". . . used for our diesel oil storage tanks." *Railroad*

". . . used as a form of gasket around gear boxes and oil boxes." *Container Mfr.*

". . . sealing ½" and ¾" threaded pipe joints around hydraulic pumps on lifting equipment . . . pressure ranges from 0 to 2500 lbs." *Chemical Company*

". . . for plate cracks and loose seams in fuel oil bunkers of towboats and barges. One such repair has withstood critical vibration in excess of 2 months." *Ship Builder*

". . . on a transformer oil tank." *Furniture Manufacturer*

". . . to stop minor leaks in and about our power houses, particularly with streamline fittings." *Power Company*

OYLTITE-Stik is one of the best time-savers and trouble-stoppers you can find.

• See your supplier for OYLTITE-Stik, or write direct on company letterhead for free sample.

LA-CO BRAND LAKE CHEMICAL CO.
3053 W. Carroll Ave., Chicago 12, Ill.

▲ For more details circle NED-838 J9 on enclosed inquiry slip ▲

New T-J HYDRAULIC DUAL RIVITOR

With Increased Riveting Production • Quality • Versatility

Added recently to the versatile T-J line of unit and production line riveting and clinching machines is the new Hydraulic Dual Rivitor. The Model HDR will set two ⅛" solid steel rivets at once with adjustable spacing from 1¾" to 18" maximum, center to center, being fed from 10' hoppers. Operating cycle is approximately .8 second, at 420 P.S.I. oil pressure furnished from a hydraulic power unit with maximum of 1000 P.S.I. output. For complete specifications write to The Tomkins-Johnson Co., 2425 W. Michigan Ave., Jackson, Michigan for Bulletin HDR-4-59.

For information on other T-J Rivitors and Clinchers write for Bulletin No. 555.

T-J TOMKINS-JOHNSON

▲ For more details circle NED-839 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

Precision Miniature Screws

Hardware Specialty Co.—All head styles and a variety of metals conforming to commercial and AN, MS, and NAS specifications are offered in one of the largest inventories of miniature machine screws in United States. Four-page Catalog "Precision Miniature Screws" describes screw sizes which include 0-80, 1-72, and 1-64, as well as 00-90 and 00-96. Lengths range from 1/16 to 1½ in.

▲ For more details circle NED-840 J9 on enclosed inquiry slip ▲

Belt Conveyor Idlers & Pulleys

Chain Belt Co. — 72-page Bulletin 5980 carries complete information on Rex rated belt conveyor idlers with permanently sealed ball bearing rolls for intermediate or moderate loads at moderate speed. Welded steel pulleys for belt conveyor, bucket elevator, and package-duty service are also covered. Special 10-page section outlines a quick, accurate selection method.

▲ For more details circle NED-841 J9 on enclosed inquiry slip ▲

Centrifugal Castings

Sandusky Foundry & Machine Co.—Growing use of centrifugally cast cylinders in unfired pressure vessels, radioactive system service, and other critical applications is pointed up in 16-page Bulletin 300. Stator shells, pressure vessels, nuclear test loop piping, atomic power reactor tubes, and other centrifugal castings are pictured. Cylinders range from 7 to 54 in. OD in single piece, as-cast lengths up to 33 ft.

▲ For more details circle NED-842 J9 on enclosed inquiry slip ▲

Steel Equipment Reference

Aurora Equipment Co., Equipto Div.—64-page 1959-60 reference manual for No. 487 steel equipment reviews such new items as slotted framing and rack angle, mezzanine and floor grating, shelf filing, and large drawer units. Standard equipment covered includes shelving, lockers, work benches, carts, and other storage equipment.

▲ For more details circle NED-843 J9 on enclosed inquiry slip ▲

Caster & Wheel Products

Payson-Harris & Reed, Inc.—Capacities range up to 15,000 lb each for the array of caster and wheel products reviewed in 60-page Catalog 60. Units range from office chair casters to heavy industrial models. New items include nylon ball casters, spring mounted casters, V-grooved wheels, pneumatic casters, and "Paythane" Eurathane compound wheels.

▲ For more details circle NED-844 J9 on enclosed inquiry slip ▲

Wire Rope Blocks

Sauerman Bros., Inc.—Light weight is combined with strength durability in Durolite wire rope blocks and sheaves which are made in capacities from 1-ton single block to 600-ton multiple sheave assemblies. Units are stocked in sizes from 6 to 18 in. with bronze bearings and from 8 to 42 in. with roller bearings. Specs, tonnage capacities, and recommended wire rope sizes are given in 10-page Catalog I.

▲ For more details circle NED-845 J9 on enclosed inquiry slip ▲

Corrosion Resistant Plastics

Haveg Industries, Inc.—Chemical tanks, over-the-road trailer tanks, fume hoods, plating tanks, and fan housings are among the many applications for corrosion resistant reinforced plastics. Physical properties, other technical information, and application data on these and other uses are covered in 28-page illustrated Catalog P-11.

▲ For more details circle NED-846 J9 on enclosed inquiry slip ▲

The International Inch

Pratt & Whitney Co.—Various problems a manufacturer can be expected to encounter as a result of America's change-over to the International Inch are discussed on a practical basis in Booklet 629. Question-and-answer section covers points of immediate concern to most manufacturers. Charts relate the difference between old and new inches to specific measuring jobs.

▲ For more details circle NED-847 J9 on enclosed inquiry slip ▲

Miniature Self-Locking Fasteners

Elastic Stop Nut Corp. of America—Compact electronic and avionic equipment can be efficiently assembled with the miniature self-locking fasteners described and illustrated in 32-page illustrated Catalog 5711. Economy and weight savings which can be achieved through material and design alternatives are covered.

▲ For more details circle NED-848 J9 on enclosed inquiry slip ▲

5 machines in 1

LENNOX TRU-EDGE METLMASTR

The "All American" Shearing, Forming and Piercing Machine

If you work in sheet or plate, here is the one machine that fits perfectly into your PROFIT picture! It eliminates costly dies and gives you complete operational versatility—Investigate now!

LM2 AVAILABLE IN THREE MODELS

Write today for complete information on the METLMASTR

LENNOX TOOL and MACHINE BUILDERS

636 N. Baxter St. • Lima, Ohio

Lennox Tru-Edge METLMASTR
Lennox-Demco Sensitive Drilling Machines

▲ For more details circle NED-849 J9 on enclosed inquiry slip ▲

HI-EFFICIENCY

1.7 ∧ 3.0 microns

THERM-X-RED†

IMMERSION HEATERS

Featuring

VAPO-VENT†

VAPOR and LIQUID TIGHT VENTING ASSEMBLY ON ALL QUARTZ HEATERS

and

NEO-TITE†

VAPOR and LIQUID TIGHT ASSEMBLY ON ALL METAL HEATERS

THERM-X-RED, a superior line of immersion heaters, presented by N.J. THERMEX, introduces a new innovation of vapor venting to eliminate internal explosion in Quartz heaters. The VAPO-VENT assembly provides a venting system for expanding gases, a completely liquid sealed head assembly and an extremely versatile unit which permits field repair with standard replacement. These exclusive THERM-X-RED features are further aided by the NEO-TITE vapor and liquid tight assembly which protects the heating elements in both Quartz and Steel units. Here at last, is a thoroughly versatile unit permitting even accidental total immersion in highly corrosive chemicals with no harm to the equipment.

These and many more features are fully detailed in our latest catalog available on request. Models in standard, thermostatic and remote control thermostatic units are available in Steel, Stainless Steel and Quartz construction.

† Trade Mark

*ON QUARTZ HEATERS

N. J. THERMEX COMPANY, INC.
535 - 533 BERGEN ST., HARRISON, N. J.

▲ For more details circle NED-850 J9 on enclosed inquiry slip ▲

* If It's New, It's No Doubt Mystik

+550°F
0°Fahrenheit
110°F

NEW! 7000-G TAPE for
Extreme Temperature Range —110° to +550° F.

MYSTIK BRAND FIBERGLAS TAPE
with Silicone Adhesives

A new concept in pressure-sensitive tapes—an essentially inorganic pressure-sensitive tape accepted by the aircraft, electrical and electronics industry.

7000-G has a tightly woven, high-tensile Fiberglas® backing with a pressure-sensitive silicone adhesive. Superior thermal and electrical properties make it ideal for many applications previously not possible for pressure-sensitive tape.

(Conforms to Government Specification MIL-1-19166. Approved as Class H Insulation.)

Write for full information on Mystik Brand 7000-G and the complete Mystik line of high and low temperature tapes using silicones with Mylar®, aluminum, copper, and Teflon.

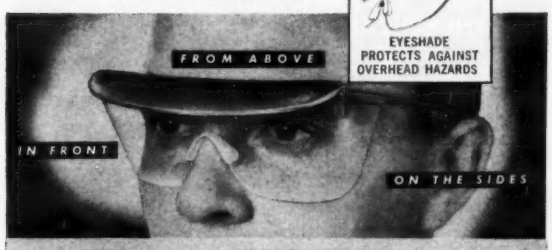
Mystik Adhesive Products, Inc.
2635 North Kildare Ave.
Chicago 39, Illinois

MYSTIK BRAND TAPES SELF-STIK

PACKAGING • PROTECTIVE COVERING • PRINTABLE • ELECTRICAL TAPES

▲ For more details circle NED-851 J9 on enclosed inquiry slip ▲

THIS IS THE NEW 3-D IN EYE SAFETY!



THE USSSCO EYESHADE SPEC
New Series 26 All-Plastic SAF-I-SPEC®

- Eyeshade-Brow Bar protects against overhead glare, falling particles and splashes, indoors or outdoors.
- One-piece safety lens with individual base curve for each eye.
- Cable temples hold brow bar snugly against forehead.
- One size fits all, men and women.
- Lightweight, comfortable. Modern styling. Frames in attractive silver gray.
- Clear or green lens, with or without matching plastic wraparound side shields.

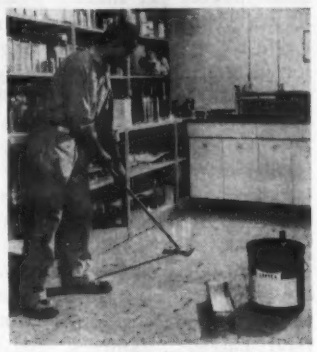
USSSCO Symbol of highest quality and assurance that product meets all ASA Code and Federal Specifications

UNITED STATES SAFETY SERVICE CO.
DIV. E-9 1535 WALNUT ST., KANSAS CITY, MO.
Canada: Parmelee, Ltd., Toronto & Montreal

▲ For more details circle NED-852 J9 on enclosed inquiry slip ▲

New Processes & Materials

ASPHALT TILE SEALER restores luster of old floors



Noninflammable, nonyellowing, and nondiscoloring Lastex undercoater and sealer for asphalt tile floors forms a seal and base for any wax or flexible film finish. It restores the luster of old floors and will not raise the tile. Sealer is applied like wax without streaking or need for buffing. Removal is with a mild alkali. Made by **Magee Chemical Co.**, 367 W. Main St., Bensenville, Ill.

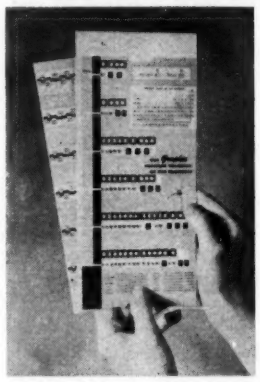
▲ For more details circle NED-854 J9 on enclosed inquiry slip ▲

DIE-SPOTTING COMPOUND is water soluble for easy removal

Blue, nondrying, Kemifilm No. 27 is a water soluble die-spotting compound which remains moist indefinitely on metal surfaces of all types. It is readily removed from clothing, skin, metal, and tools with water. One application is usually all that is required, but it can be re-applied if necessary. Supplied ready to use, it is nonflammable and nontoxic. Made by **Wayne Chemical Products Co.**, 9250 Copland Ave., Detroit 17, Mich.

▲ For more details circle NED-855 J9 on enclosed inquiry slip ▲

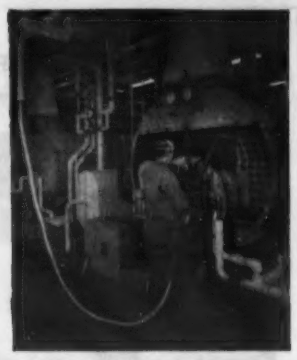
ELEMENTS REFERENCE SELECTOR gives physical, chemical properties



An accurate picture of the elements in terms of their physical and chemical properties is provided by the Graphic Periodic Selector of the Elements. With it the user can quickly study and compare the electron structure of atoms, chemical activity of elements, size of atoms and ions, acidity, stability, and molecular structure of chemical compounds. Device features a slide rule for determining the type of chemical bond between two elements. When data slide is in proper position, desired information for all elements within any particular group of elements is immediately shown. The plastic selector sells for $3.25. Offered by **Graphic Calculator Co.**, 633 S. Plymouth Court, Chicago 5, Ill.

▲ For more details circle NED-856 J9 on enclosed inquiry slip ▲

Boiler Cleaning Made Easy with SPENCER VACUUM



It's *quick, clean, effective.* No time-consuming, back-breaking brushing. High velocity *air* does the work.

A Spencer vacuum cleaning system offers many advantages:

- Boilers can be cleaned HOT.
- Tubes easily cleaned even in *cramped quarters.*
- Scale formation is reduced.
- Fuel savings are substantial.
- Requires an average of only 30 minutes.
- Bases of stacks and breechings can also be cleaned.
- System can be utilized for general plant maintenance.

Request Bulletin No. 137A.

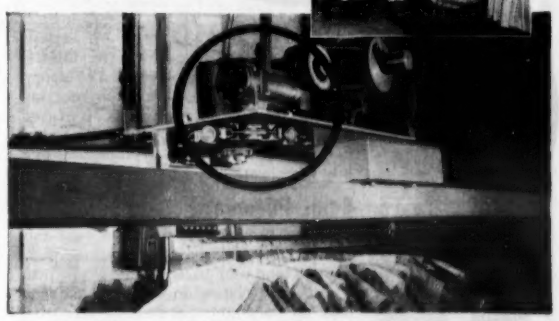
The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

▲ For more details circle NED-857 J9 on enclosed inquiry slip ▲

a CM Power-Flex Conveyor using a WINSMITH Speed Reducer

"DELIVERS THE GOODS" FOR MONTGOMERY WARD

WITH THE POWER-FLEX SYSTEM, Montgomery Ward handles all women's and children's garment requirements for more than 500 retail stores. Each of these trolleys can carry 50 garments or a maximum load of 200 lbs.



A CLOSEUP of the Winsmith Model 5 CVD Speed Reducer used to drive the CM Power-Flex Conveyor which features Telematic Dispatch Control. Chain Speed is 40 ft/min.

MONTGOMERY WARD'S DISTRIBUTION CENTER on Varick Street in New York City, is built around a Columbus McKinnon Power-Flex Conveyor System equipped with a Winsmith Speed Reducer. CM's Power-Flex is a power and free system that, in this application, handles as many as 38,000 women's and children's garments in a single 8-hour day. Its advanced design and construction features permitted savings of 50,000 sq. ft. of floor space and untold dollars in operating economies.

COLUMBUS McKINNON specifies Winsmith Speed Reducers for their Power-Flex Systems because high output efficiency, compactness, long service life, minimum maintenance and low initial cost are prime factors.

FOR EVERY APPLICATION from 1/100 to 85 H.P. —in ratios from 1.1:1 through 50,000:1—investigate the advantages of standardizing on Winsmith Speed Reducers for your products.

WINSMITH SPEED REDUCERS

WRITE TODAY for complete selection information and engineering data.

WINSMITH, INC.
119 Eaton Street, Springville, (Erie County), N. Y.

▲ For more details circle NED-858 J9 on enclosed inquiry slip ▲

THE NEW MILLER ALL-IN-ONE SPOT WELDER for ALL NUMBER ONE WELDS

LECTRO SPOT

Built-in Timer Turns the Trick

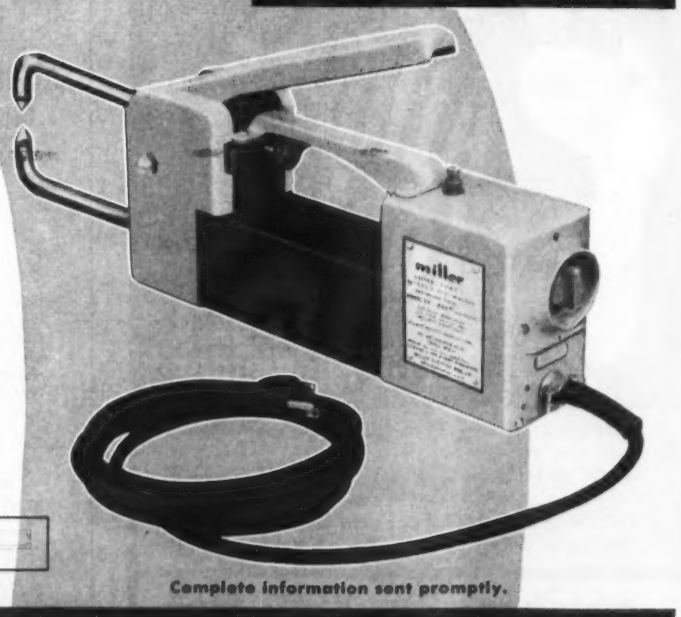
Sheet metal shops ready for new speed, economy and completely uniform spot welds will want the new Lectro Spot. Here's why:

Operator depresses lever and,
1 — 2 — 3:
Tongs grip work at pre-set pressure;
Starter switch is actuated;
Weld sequence starts and stops automatically;
Result: EVERY WELD IS IDENTICAL!

Pressure adjustment and electronic timer controls instantly accessible.

Three models in 115 or 230 volts weld mild steel of 1/8" to 3/16" combined thickness; 1.5 KVA weighs 29 lbs., 2.5 KVA weighs 39 lbs.

Wide choice of tongs available.



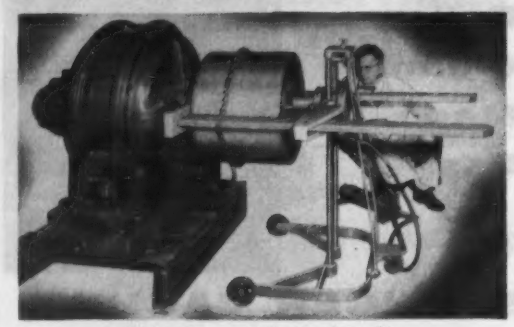
Complete information sent promptly.

miller ELECTRIC MANUFACTURING COMPANY, INC. Appleton • Wisconsin

Distributed in Canada by Canadian Liquid Air Co., Ltd., Montreal

▲ For more details circle NED-853 J9 on enclosed inquiry slip ▲

THE QUICK, EASY WAY TO REMOVE AN OBJECT FROM A SHAFT!



This Powerful, Hydraulic

PULLEY PULLER

For Removing Pulleys, Wheels, Gears, Couplings, Sheaves, etc.

One man can do it in minutes — even if objects are stuck fast. No crowbars, sledges, or torches. No damage to equipment. Puller is adjustable — easy to move — rugged. Hundreds being used in industry.

- 5-ton size on wheels $122.00
- 20-ton size on wheels $368.00
- 50-ton size on wheels $830.00

F.O.B. Factory, New Quicklink chain and set of ten ram adapters at slight additional cost.
Write for complete information · Catalog E

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E 4th St. Davenport, Iowa

▲ For more details circle NED-861 J9 on enclosed inquiry slip ▲

Tire or wheel selection simplified through...

OHIO RUBBER "CUSTOMEERING"

HERE'S HOW... An analysis of *your* service needs by the ORCO "Customeering" man is the key. His recommendations on types, sizes, tread compounds and tread design is unbiased because Ohio Rubber makes a complete line of tires and wheels for industrial and other applications.

Semi-Pneumatic Standard Tread
Designed for high resistance to wear this "Air King" Industrial Tire features full-cushion load support, shock absorbing protection, easy rolling under load. Complete data on sizes and specifications available in ORCO Bulletin No. 714.

Semi-Pneumatic Tractor Tread
An outstanding line of "Air-King" Industrial Tires designed for special applications. Engineered to customer's specifications.

Solid Tires Standard Tread
Offer the same standout features of the "Air King" Semi-Pneumatic Industrial Tire but in a solid tire for heavier loading.

SOLID MOLDED TIRES AND WHEELS

Solid Tires—Available as standard items for *any* wheelgoods application or can be engineered to meet specialized service requirements.

Solid Wheels—Available at low cost from standard mold equipment for light applications, or as high or medium quality caster wheels engineered to meet service needs of heavier applications and many industrial requirements. 91N2

IT COSTS NOTHING TO FIND OUT
A survey of *your* special service problems by your nearby ORCO "Customeering" man could mean substantial savings on tire costs and maintenance. Write to The Ohio Rubber Co., Willoughby, Ohio. Be sure to ask for your free copy of ORCO Bulletin No. 714.

ORCO THE OHIO RUBBER COMPANY
WILLOUGHBY, OHIO
A DIVISION OF THE EAGLE TIRE COMPANY

▲ For more details circle NED-862 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

High Speed Indexing Mechanisms

Ferguson Machine Corp. of Indiana—Speeds up to 2000 indexes per minute with zero backlash for 8000 to 20,000 hr of operation are reported for line of precision roller gear drive indexing mechanisms. Designed for intermittent and oscillating motions, they are described in 24-page Catalog 108. Data on calculating load requirements and designing an installation are provided. Dial sizes from 12 to 120 in. have 4 to 24 stations.

▲ For more details circle NED-863 J9 on enclosed inquiry slip ▲

Constant Area Seals

Bellofram Corp.—Applications of Bellofram deep convolution, long stroke, constant area seals include regulating valves, pressure switches, remote positioners, fluid barriers, dampers, and snubbers. Installation drawings, methods of attachment, installation techniques, and standard dimensions are among the engineering data presented in 20-page Bulletin BF200-3.

▲ For more details circle NED-864 J9 on enclosed inquiry slip ▲

How to Determine Materials Handling Needs

Yale & Towne Mfg. Co., Yale Materials Handling Div.—Would industrial truck scale models and templates, together with a mock-up plant layout or scale drawing, aid you in determining the requirements of your materials handling systems? These models and visual aids are available through the revised 24-page "How Book of Cost-cutting Materials Handling." The Vis-O-Graph chart aids in analyzing your needs.

▲ For more details circle NED-865 J9 on enclosed inquiry slip ▲

Chain Conveyors

Chain Belt Co.—By following the illustrated do's and don't's for operation and maintenance of chain conveyors, costly down time and premature replacement are prevented. This information is found in the pocket-size Handbook 59127, along with installation data.

▲ For more details circle NED-866 J9 on enclosed inquiry slip ▲

Manufacturing Facilities

Lake Shore, Inc.—Boring mills, planers, milling machines, lathes, grinders, shears, brakes, cutters, saws, and welding equipment for various metals are among the facilities available for contract manufacturing at this company. Engineering and other services are covered in 12-page brochure. Thirty photos are included.

▲ For more details circle NED-867 J9 on enclosed inquiry slip ▲

Fractional Horsepower Motors

Howard Industries, Inc.—Ratings from 1/2000 to 1 hp are available in line of fractional horsepower motors described in 8-page "capsule catalog." Universal direct current, induction and shaded-pole motors are covered, and motor parts sets, blowers, and gear reduction units are listed.

▲ For more details circle NED-868 J9 on enclosed inquiry slip ▲

Accepted Procedure...

against Athlete's foot with modern DOLGE Fungicides

DUSTING Alta-Co Foot Powder on the feet and inside shoes
FOOT BATH Alta-Co Powder dissolved in water for group prophylaxis
FLOOR WASH H.D. Fungicide diluted in 300 parts water—mop on floor

Write for Booklet on Athlete's Foot Control

DOLGE WESTPORT, CONNECTICUT

▲ For more details circle NED-869 J9 on enclosed inquiry slip ▲

Do you get more holes per minute • longer drill life • closer tolerance holes • less operator fatigue?

Equal size chips mean you are getting these results from your drills.

Hand sharpened drills should produce equal size chips . . . but only after time-consuming work by an expert. Now, with the Black Diamond Drill Grinder*, anyone in your plant can do the job with repeat accuracy in just a few seconds. Get the facts by return mail. Write exclusive distributor:

EDWARD BLAKE COMPANY, INC.
Dept. 8, 570 Pleasant St., Watertown, Mass. WA 6-0100

*Black Diamond Saw & Machine Works, Inc.
Natick, Mass.- Manufacturers of Black Diamond and Worcester Drill Grinders.
Black Diamond Drill Grinders: #70 drills up to ¼" Worcester Drill Grinders: ⅛" drills up to 2½"

▲ For more details circle NED-870 J9 on enclosed inquiry slip ▲

NEED HEAT?

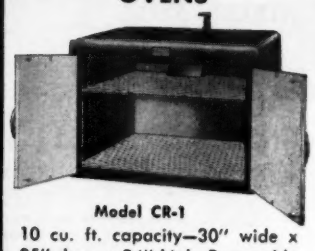
One of our 85 Standard Industrial Ovens will meet your needs.
BENCH • CABINET • WALK-IN TYPES.

For preparation of materials and chemicals for production.

On the production line for intermediate heating.

For baking-on finishes or drying.

GRIEVE-HENDRY OVENS

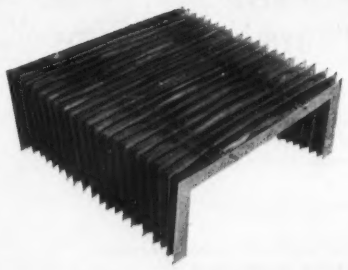


Model CR-1
10 cu. ft. capacity—30" wide x 25" deep x 24" high. Removable shelves and drip pan. Forced air circulation. Adjustable temperature control to 225° F. $110.50 f.o.b. Chicago
Quick quotations, prompt delivery, reasonable prices on Ovens built to your requirements.

Write for literature
GRIEVE-HENDRY CO., INC.
1353 N. Elston Ave., Chicago 22, Ill.

▲ For more details circle NED-871 J9 on enclosed inquiry slip ▲

PROTECTED WAYS



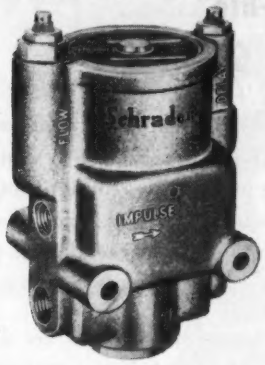
GORTITE way-protectors for milling machines, grinders, boring bars and other machine tools are fabricated to order from fiberglass and new neoprene-base materials. Instructions on how to order and apply the wide range of horizontal and vertical designs are contained in new bulletin GW-100.

A&A MFG. COMPANY, Inc.
712 S. 12th Street, Milwaukee 4, Wis.
ALL SHAPES AND CONTOURS
BOOTS . . . SLEEVES . . . WAY PROTECTORS

▲ For more details circle NED-872 J9 on enclosed inquiry slip ▲

NEW!

SCHRADER 3-WAY TIMED DELAYED BLAST VALVE



No. 830
Schrader Delayed
Blast Valve

Use it for timed sequencing of cylinder... to provide and control reciprocation of cylinders without cams and with pre-set dwell at each end.

Can be used with air-charged timing chamber to control flow of oil, water, liquids.

Set time before flow starts, after charging valve, by adjusting "Delay" needle valve.

Control time of flow from discharge port by adjusting "Flow" needle valve.

SEND FOR DESCRIPTIVE DATA ON THIS NEWEST MEMBER OF THE SCHRADER FAMILY OF AIR VALVES, CYLINDERS AND ACCESSORIES

Schrader®
A. SCHRADER'S SON
Division of Scovill Manufacturing Co., Inc.
459 Vanderbilt Ave., Brooklyn 38, N. Y.

▲ For more details circle NED-873 J9 on enclosed inquiry slip ▲

FAST . . . . . Productive

But, that's not all

IT'S RUGGED AND BUILT TO LAST!

LOOK . . .

- Easy To Transport—Only 180 Pounds
- 10 Inches Of Carriage Travel
- Improved Chuck—No Projecting Jaws. You Can Work Within 1" Of Face. Chip Problem Virtually Eliminated
- Coolant Is Directed Automatically On Work With Easy Flip Of Spout
- Transmission Is Sealed Self-Contained Unit. Easily Accessible. Accurately Cut Helical Gears, Ball Bearing Throughout
- Spindle Bearings Factory Lubricated
- Motor—Ample Power, Easily Accessible
- Full Visibility To Work
- Easy to Read Thread Gauge

Write for literature, or . . .

Call Mr. TOLEDO NOW!
YOUR FRIENDLY DEALER or SUPPLIER

PIPE THREADERS • PIPE WRENCHES • PIPE MACHINES
TOLEDO®
TOLEDO PIPE THREADING MACHINE CO. TOLEDO 4, OHIO

▲ For more details circle NED-874 J9 on enclosed inquiry slip ▲

New Processes & Materials

SILICONE RELEASE AGENT
spray is nontoxic, heat resistant

Spray application of Sprayway silicone release agent prevents sticking of packaging materials such as Cellophane, Pliofilm, polyethylene, vinyl, and wax to heat sealing and packaging equipment, and to themselves when not desired. Nontoxic and heat resistant product aids in keeping manual and automatic heat sealing equipment clean. It is packaged in a convenient 20-oz aerosol dispenser. Made by **Sprayway, Inc.**, 7644 S. Vincennes Ave., Chicago 20, Ill.

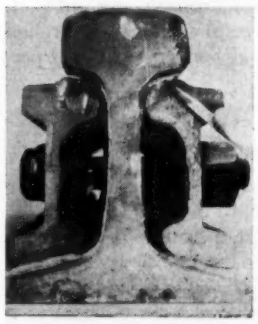
▲ For more details circle NED-875 J9 on enclosed inquiry slip ▲

PROTECTIVE COATING
process treats aluminum extrusions

Superficial corrosion of aluminum extrusions is prevented during routine shipping, storing, and handling by Anocote treatment. Offered as a company service, the process contributes to smooth, uniform, and defect-free products after anodizing or etching by the fabricator. Coating does not alter the natural aluminum color and may be used as the final surface finish. Process is initially offered on Alloy 6063 extrusions only. Made by **Harvey Aluminum**, 19200 S. Western Ave., Torrance, Calif.

▲ For more details circle NED-876 J9 on enclosed inquiry slip ▲

TRACK JOINT ADHESIVE
immobilizes joint between rails



Smooth, immobile butt joints between railroad track sections are achieved with Bondarc thermosetting adhesive which is unaffected by the elements and can be used in hot and cold climates. Adhesive is spread on the bearing surfaces of the joint bars which are placed on each side of the rail and bolted together. It "freezes" the joint into a continuous unit and thus prevents movement and battering of rail ends. Tensile strength of bonded joint is about four times that of ordinary bolted joint. Bondarc will cure at atmospheric temperature, but cures faster with heat. Ultimate strength is reached within 2½ to 4 hr. Bond lasts many years if applied correctly. Developed by Armstrong Cork Co. and distributed by **Rail Joint Co.**, 50 Church St., New York, N. Y.

▲ For more details circle NED-877 J9 on enclosed inquiry slip ▲

COMPACT and PORTABLE!

500 DeLuxe Drum Rotator

by MORSE

Faster, Lower Cost
More Thorough

- MIXING
- BLENDING
- TUMBLING
- CLEANSING

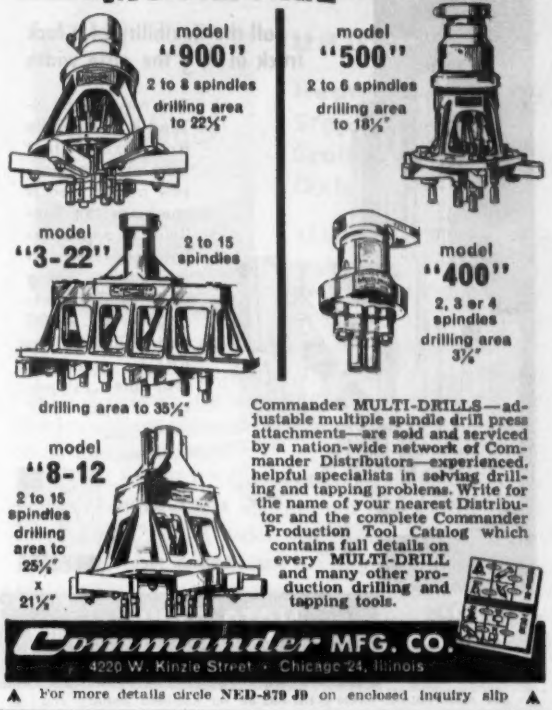
Handles 30 and 55 gal. drums; and with special attachments, 1 and 5 gal. containers; weight capacities up to 500 lbs. Powerful, smooth, motorized unit. Available with 10, 20 or 40 rpm. Weighs only 137 lbs. Neoprene drive wheels are oil and chemical resistant. Also available with explosion-proof motor. Patented features and design make this the finest portable rotator available.

Clip this ad to your letterhead for free MORSE Catalog.

MORSE
MANUFACTURING CO., INC.
756 West Manlius Street, East Syracuse, N. Y.

▲ For more details circle NED-878 J9 on enclosed inquiry slip ▲

For LOW COST Hole Production
Pick a MULTI-DRILL® to Fit the Job



Commander MULTI-DRILLS—adjustable multiple spindle drill press attachments—are sold and serviced by a nation-wide network of Commander Distributors—experienced, helpful specialists in solving drilling and tapping problems. Write for the name of your nearest Distributor and the complete Commander Production Tool Catalog which contains full details on every MULTI-DRILL and many other production drilling and tapping tools.

Commander MFG. CO.
4220 W. Kinzie Street • Chicago 24, Illinois

▲ For more details circle NED-879 J9 on enclosed inquiry slip ▲

For safe, sure sealing of fasteners

Stat-O-Seal®

SELF CENTERING
ONE-PIECE EASY ASSEMBLY
NO-LEAKAGE SEALING

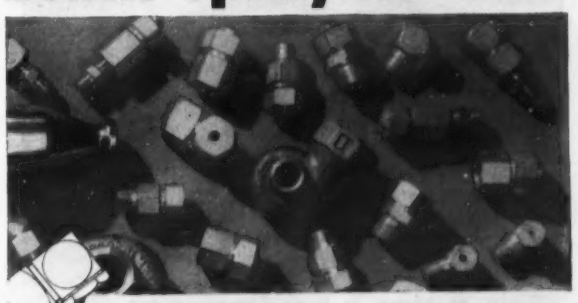
Stat-O-Seals offer superior features for sealing fasteners. The seal is under controlled confinement with full metal to metal contact to assure a positive, no-leakage seal at low or high pressures or vacuum. They are self-centering, provide a high re-usability factor, give longer service. Single, one-piece configuration provides fool-proof assembly, and quick, visual installation inspection; are economical in first cost as well as obtaining savings in safety and ease of installation.

Send for free catalog.

Parker SEAL COMPANY
Culver City, California and Cleveland, Ohio
A DIVISION OF PARKER-HANNIFIN CORPORATION

▲ For more details circle NED-880 J9 on enclosed inquiry slip ▲

Binks spray nozzles



for washing, cooling, processing, humidifying, dehydrating, and hundreds of other applications.

You'll get the *right* nozzles quicker by calling Binks ...manufacturers of one of the most complete selections ever produced.

There is a size and spray pattern for every purpose...with nozzles cast or machined from standard or special corrosion-resistant metals and materials.

MAIL COUPON NOW!

Binks Manufacturing Company
3122-34 West Carroll Ave., Chicago 12, Ill.
O. K. Binks, send me your comprehensive Spray Nozzle Catalog without obligation.
NAME
COMPANY
ADDRESS
CITY ZONE STATE

Binks
A COMPLETE LINE OF INDUSTRIAL SPRAY NOZZLES AND COOLING TOWERS

612

▲ For more details circle NED-881 J9 on enclosed inquiry slip ▲

NEW .. MOTO-TRUC X-TEND-R

... all the flexibility of a fork truck in 1/3 the aisle width

The Moto-Truc X-Tend-R can handle any size pallet from aisles as narrow as six feet. It combines the flexibility of a counterbalanced truck with the space saving features of an outrigger truck. 2,000 and 3,000 lb. capacity models available ... standard lifts to 130"

FREE BULLETIN Get the new X-Tend-R bulletin today!

The MOTO-TRUC Company
1961 EAST 59th ST. • CLEVELAND 3, OHIO

▲ For more details circle NED-882 J9 on enclosed inquiry slip ▲

KNIVES STAY SHARP LONGER

Knives on the Steelweld Shear above were practically as sharp as new, after months of continuous operation, 8 hours a day, 6 days a week. Cut pieces were burrless, straight and true.
Long knife wear is the result of important features built into Steelweld Shears, such as solid one-piece frame, pivoted blade and easy knife adjustment.
For better, faster, easier shearing get the facts on Steelweld Shears. For all plate up to 30'-0" long or 2" thick.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy of catalog No. 2011.

THE CLEVELAND CRANE & ENGINEERING CO.
6622 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

▲ For more details circle NED-883 J9 on enclosed inquiry slip ▲

Right at home in high temperatures (700°), steam or gases ... Garlock "900" Gasketing

Widely applied to pipe flanges, boiler manholes and handholes, gasketed joints on steam engines, compressors, internal combustion engines, pumps. Garlock "900" is made of long-fibre Canadian asbestos bonded with a special Garlock compound into a homogeneous structure. Resists plastic flow under heavy bolt load ... excellent compressibility.

For service against hot oil at high temperatures, steam and hot gases to 700° F, a more dense gasketing, Garlock "7021" is recommended; at lower (300°) temperatures, Garlock "7228" is suggested. Both offer fine compressibility and resistance to heavy bolt loads without excessive plastic flow.

Discuss high temperature gaskets with your local Garlock representative. Call him or write for Gasket Folder AD-162.

THE GARLOCK PACKING COMPANY, Palmyra, N. Y.
For prompt service, contact one of our 26 sales offices and warehouses throughout the U. S. and Canada.

GARLOCK

Packings, Gaskets, Oil Seals, Mechanical Seals, Molded and Extruded Rubber, Plastic Products

Canadian Division: The Garlock Packing Co. of Canada Ltd. • Plastics Division: United States Gasket Company

▲ For more details circle NED-884 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

Floodlights

Miniature edition of company's Floodlight Catalog contains all the original material on selection of floodlights; general purpose, heavy duty, mercury vapor, and special floodlights; lighting for hazardous locations; searchlights; underwater lighting; poles; accessories; installation suggestions; and lighting calculations. Write for 184-page Bulletin 2714 on your letterhead to Crouse-Hinds Co. Syracuse 1, N. Y.

▲ For more details circle NED-885 J9 on enclosed inquiry slip ▲

Industrial Rubber Products

Irving B. Moore Corp.—O-rings, molded rubber products, extrusions, gaskets, sponge rubber, and stripping are among items made from silicones, Buna-N and GR-S synthetic rubber, neoprene, and Teflon by this company. Primary physical properties, as well as those comparing natural and synthetic rubbers, are provided. Reaction of materials to chemicals is charted.

▲ For more details circle NED-886 J9 on enclosed inquiry slip ▲

Barrel Finishing

King-Seeley Corp., Almco-Queen Products Div.—"Almco Album of New Products" contains a collection of literature on barrel finishing machines, methods, and media. Spindle machines, media classifiers, tumblers, vibratory and barrel finishers, roll barrels, a budget-priced unit, barrel with built-in separator, and advanced design units are among products treated by individual bulletins.

▲ For more details circle NED-887 J9 on enclosed inquiry slip ▲

Spot Welded Fasteners

Ohio Nut & Bolt Co.—Typical applications for Spotweld fasteners reviewed in 6-page Folder 595 include preparation of sheet metal panels for assembly, improving product design, increase strength, minimize vibration failure, and save space. Fasteners feature an electrode target area which guides electrode tip to perfect alignment.

▲ For more details circle NED-888 J9 on enclosed inquiry slip ▲

Indicating Flowmeters

Eclipse Fuel Engineering Co.—Seico flow meters are available for gases only, liquids only, and for combined liquids and gases. These are described in catalog along with two series of standard manometers which are designed to work to 100 psig maximum, with higher pressures available on special order. These universal and heavy-duty manometers use water, glycerine, mercury, or oil.

▲ For more details circle NED-889 J9 on enclosed inquiry slip ▲

Engineered Weighing Systems

A. H. Emery Co.—Way-Pac 5000 Series packaged hydraulic weighing systems are offered in load capacities up to 5000 lb. Basic principle is that of converting load into hydraulic pressure. Compression, compression with "rolling ball" head, tension, cable tension, and strut cell types are reviewed in 8-page Bulletin 591. It gives component selection instructions.

▲ For more details circle NED-890 J9 on enclosed inquiry slip ▲

Ground Flat Stock

Marshall Steel Co.—Weight tables for ground flat stock in 18, 24, and 36-in. lengths are provided in 4-page folder. Weights for drill rod stock sizes in 36-in. lengths are also tabulated. Flat stock is offered in thicknesses from 1/64 to 2 in.

▲ For more details circle NED-891 J9 on enclosed inquiry slip ▲

Liquid Polyvinyls

Bee Chemical Co.—Logosol vinyl plastisols and organisols are essentially coating or molding compounds in liquid form which are converted to structurally strong solids by moderate heating. Typical uses include vinyl coated metal racks, vinyl clad steel or aluminum, sewer tile gaskets, and covering of electrical parts. A 16-page booklet discusses advantages, application, and gives technical data.

▲ For more details circle NED-892 J9 on enclosed inquiry slip ▲

Tracing Templates

Northwestern Tools, Inc.—Companies who manufacture jigs, fixtures, and special machinery are offered a set of full scale tracing templates for over 200 components commonly used by the industry. Included are tracings for toggle shoe clamps, aluminum and cast iron hand knobs, spherical washers, studs, V-pads, T-slot nuts, jig feet, and latch bolts.

▲ For more details circle NED-893 J9 on enclosed inquiry slip ▲

K. O. "HEAT" with long-life SILICONE GREASES

Heat-stable Dow Corning Silicone Greases deliver a knock-out punch to costly lubrication failures and sharply reduce relubrication and maintenance costs. They "stay put" at temperatures from −100 up to 500 F ... won't drip, evaporate or gum up.

Silicone high temperature greases are the money-saving way to lubricate ball bearings, bushings, cams, gears, valves and other parts that get *hot* in service.

For full information on silicone lubricants, write department 5421

first in silicones Dow Corning CORPORATION MIDLAND, MICHIGAN

▲ For more details circle NED-894 J9 on enclosed inquiry slip ▲

HOW CADY PALLET LIFTERS MAKE YOUR HOISTS AND CRANES INTO FORK LIFTS AT LOW COST

You can now handle pallet and other unit loads where fork trucks are too expensive or impractical. America's foremost industries are saving thousands of dollars in first cost, handling cost, operating cost, and maintenance cost with Cady Pallet Lifters. Repeat orders from users everywhere are proof of satisfaction and economy. Counterbalanced to hang level, they are easy to use, save time and reduce non-productive handling costs in plants, in yards, on docks, and on job sites. Standard models up to 10,000 lbs. capacity—custom models to fit special loads and conditions. Also coil and pipe lifters. Write or phone JAckson 4145 for full information and name of distributor.

CADY METAL FABRICATING INC.
84 SCHENCK ST. • N. TONAWANDA, N. Y.

▲ For more details circle NED-895 J9 on enclosed inquiry slip ▲

Completely Modern ... the new MULTI-CLEAN FLOOR MACHINE

● Sleek ... elegant ... rugged ... and a champion in performance. These exciting and versatile new MULTI-CLEAN models have features not available in other machines. *For example:*

Detachable 3-conductor cable fits recessed twist-lock receptacle ... dual switch controls may be operated by either hand ... bumpers circle both base and top ... capacitor-start, induction-run motor reaches full operating speed almost instantly ... all ball bearinged gear unit ... fully adjustable handle ... big wheels.

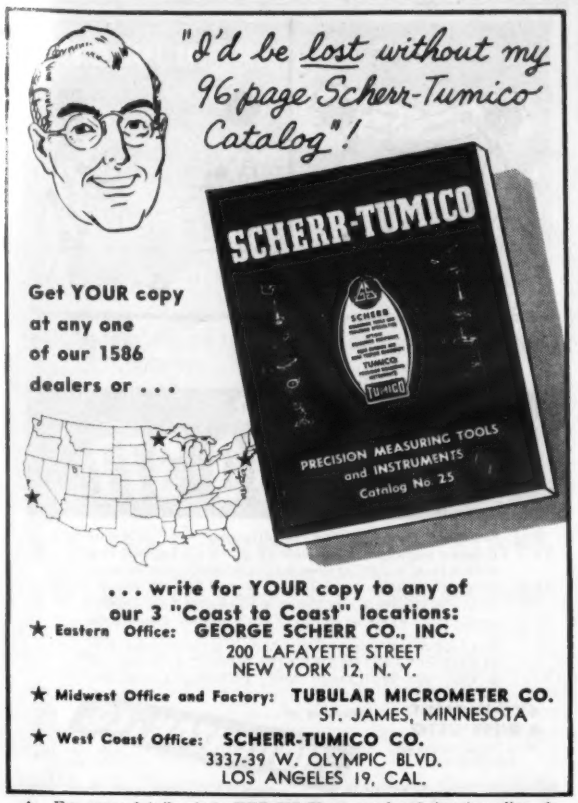
14", 16", and 22" MULTI-CLEAN Floor Machines are similar to 19" model shown here. Lite-12, 31", and Explosion-proof Models also available.

It will pay you to investigate savings and other advantages you'll enjoy when you own a MULTI-CLEAN Floor Machine. See your Distributor or write MULTI-CLEAN *today*.

MULTI-CLEAN Method

MULTI-CLEAN PRODUCTS, INC.
Department NE 65-99
St. Paul 16, Minnesota

▲ For more details circle NED-896 J9 on enclosed inquiry slip ▲



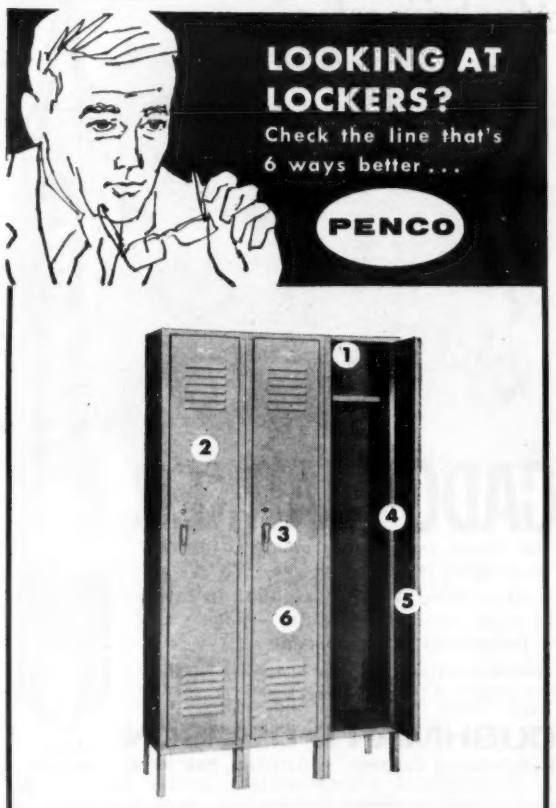
. . . write for YOUR copy to any of our 3 "Coast to Coast" locations:

★ Eastern Office: GEORGE SCHERR CO., INC.
200 LAFAYETTE STREET
NEW YORK 12, N. Y.

★ Midwest Office and Factory: TUBULAR MICROMETER CO.
ST. JAMES, MINNESOTA

★ West Coast Office: SCHERR-TUMICO CO.
3337-39 W. OLYMPIC BLVD.
LOS ANGELES 19, CAL.

▲ For more details circle NED-897 J9 on enclosed inquiry slip ▲



1 New Door Frame
Intermembered and lapped to resist twisting, stress and strain. Welded for maximum strength.

2 Extra Strong Body
24-gauge prime cold rolled steel. Flanged edges nest to provide rigid corner construction.

3 Handsome New Handle
Functionally designed—chrome finish. Easy and noiseless to operate—cannot be pried from door—shield keeps padlock from marring finish.

4 Extra Strong Hinges
Doors hang firmly on heavy gauge full loop hinges. *Projection welded* to door frame.

5 Quiet
Rubber silencers make Penco lockers noiseless to open . . . silent when closing.

6 Beautiful Surface Finish
Special phosphate pretreatment before painting gives positive surface protection, better paint adhesion.

This completely new locker line features smooth, clean lines and quiet, efficient locker performance. An unusual combination of advanced design features insures long, trouble-free locker life. Expertly fabricated from prime steels. Available in 14 styles. 3 standard and 6 optional colors . . . baked on for permanence.

WRITE FOR CATALOG No. 6000
Types—Styles—Sizes—Equipment—Planning Aids—Engineering Details and Specifications

ALAN WOOD STEEL COMPANY
PENCO DIVISION
406 Brower Avenue, Oaks, Pennsylvania

▲ For more details circle NED-898 J9 on enclosed inquiry slip ▲

New Processes & Materials

POROUS NICKEL
produced in large, intricate shapes with controlled porosity to suit use

Sheet, piping, and elbowed or straight chutes can be made of Cormet A, a pressed and sintered porous nickel usable at temperatures up to 575° F. Large and intricate shapes can be produced with holes, projections, and indentations. Uniform porosity and pore diameter can be tailored to specifications between 1 and 45 microns. Yield strengths range up to 10,000 psi, depending upon porosity.

Maximum thickness is 1 in., although thicker pieces can be made. Sheets up to 12 x 30 in., and 2-ft long cylinders with a 12-in. diameter can be made. Surface can be machined to a high polish without affecting permeability. Applications include noncontacting conveyor with products riding on a thin cushion of air forced through the pores, noncontacting chute for molten glass, and fixed contact roller for high speed machinery with vacuum applied through the pores to hold the product securely. Made by **Corning Glass Works**, Box 544, Corning, N. Y.

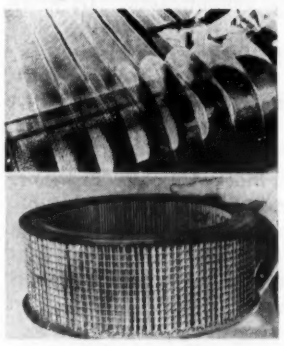
▲ For more details circle NED-899 J9 on enclosed inquiry slip ▲

PROTECTIVE METAL COATINGS
chemical type simulates plating

Brass, gold, copper, bronze, and other finishes can be simulated over bright nickel plate with Platelustre finishes. The protective chemical coatings are applied by standard spray or dip processes, providing "plated finish" effects. Special equipment is not needed. Developed by **Maas & Waldstein Co.**, 2130 McCarter Highway, Newark 4, N. J.

▲ For more details circle NED-900 J9 on enclosed inquiry slip ▲

GALVANIZED WIRE CLOTH
braided weave reinforces edges



A firm, workable edge is provided in this wire cloth by an integral flat braid which is woven as a warp (lengthwise) wire. The strengthened edge can be gripped, embedded, or otherwise fastened by methods previously impractical with wire cloth. Cloth is hot galvanized after weaving and is slit through the braid to the reinforced edge as shown in top picture. Braid weave is made in 2 to 8-mesh in widths to 48 in., and may be slit from 2 to 12 in. wide. Lower picture shows air filter with braid edge wire cloth protecting the filter element. Edge of cloth is embedded in plastic end rings. Made by **National-Standard Co.**, Reynolds Wire Div., Dixon, Ill.

▲ For more details circle NED-901 J9 on enclosed inquiry slip ▲

ROOF COATINGS
reflect 71 per cent of sun's heat

Under-roof temperatures are reduced by as much as 15° by RIW Asphalume and Asbestalume roof coatings. They consist of billions of pure aluminum flakes added to an asphalt base for reflection of up to 71 per cent of the sun's heat. Coatings afford protection for as long as 10 years against severe weather conditions. Asphalume provides a highly "polished" finish. Asbestalume, with its reinforcement of asbestos fibers, is intended for extra heavy duty service. Both can be applied with brush or squeegee and are ready-mixed, and ready to use. Made by **Standard-Toch Chemicals, Inc.**, Toch Brothers Div., 2600 Richmond Terrace, Staten Island 3, N. Y.

▲ For more details circle NED-902 J9 on enclosed inquiry slip ▲

Protects Metals at Red Hot Temperatures!

UP TO 2200°F

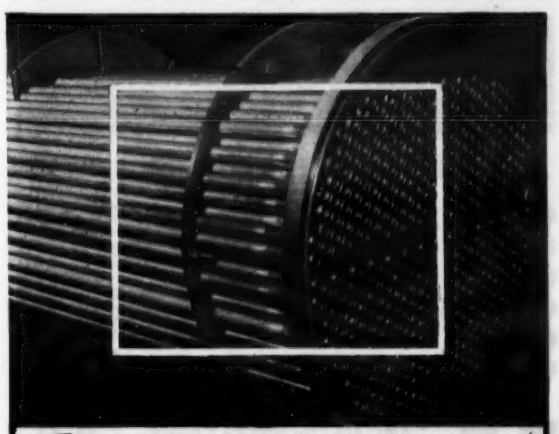
Heatproof Coating Stops Corrosion, Scaling and Oxidation

MARKAL "S-R" Coatings were developed to protect metals, graphite or carbon parts against scaling, corrosion, oxidation, or carbon and hydrogen penetration at temperatures up to 2200°F. MARKAL "S-R" Coatings are excellent for the protection of stacks, radiant tubes, retorts, carburizing grids, mufflers, manifolds, etc.

MARKAL "S-R" Coatings will not peel or crack at high temperatures and are not affected by rapid heating and cooling cycles.

MARKAL Coatings are manufactured in a complete range of types for specific applications. Write for a free copy of Catalog MPC. The **MARKAL COMPANY**, 3053 W. Carroll Ave., Chicago 12, Illinois.

▲ For more details circle NED-903 J9 on enclosed inquiry slip ▲



Transferring Heat?

. . . then look at the comparison above. The white rectangle in the photo represents the surface area of a length of plain tube. The entire photo shows the surface area of a piece of Wolverine Trufin® Type S/T of the same length. Both tubes are ¾" O.D. This is dramatic proof of the extra *surface* area Trufin provides. Yes, you get extra *service* too. Write.

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17270 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

▲ For more details circle NED-904 J9 on enclosed inquiry slip ▲

GREEN *Pantograph Engravers*

ELIMINATE DELAYS!
Keep the work in your own plant.

PORTABLE 40-POUND BENCH-MODEL 106

Famous 2 or 3-dimensional engraver, successfully used by thousands, features 5 positive, accurate pantograph ratios. Versatile ball bearing spindle has three speeds up to 14,000 rpm; height of pantograph and position of cutter are continuously adjustable; one copy carrier (supplied) accepts all standard master type sizes.

The Model 106 has proven incomparable for speed and accuracy . . . yet reasonably priced.

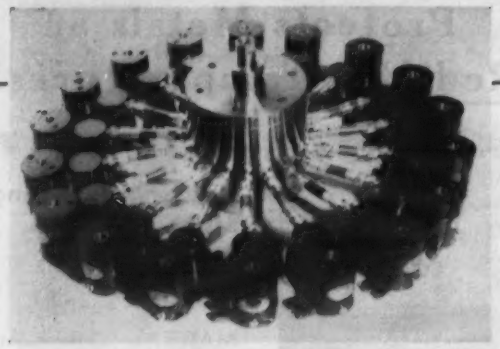
Cutter grinders, rotary tables, master letters, compound slides, name plates and all required accessories. For complete information, write to

MODEL D2 HEAVY-DUTY 2-DIMENSIONAL

- 575 pounds . . . rigid, sturdy, precise
- Vertical adjustment of copy table automatic with Pantograph
- Unobstructed on three sides to take large work
- Micrometer adjustment for depth of cut
- Ball bearing construction throughout super-precision ball bearing spindle
- Spindle speeds up to 26,000 rpm for engraving or machining modern materials
- Ratios 2 to 1 to infinity master copy area 26" x 10"
- Vertical range over 10"

GREEN INSTRUMENT COMPANY, INC.
375 PUTNAM AVENUE, CAMBRIDGE 39, MASS.

▲ For more details circle NED-905 J9 on enclosed inquiry slip ▲



REDMER

AIR CHUCK and ROTARY VALVE for FAST, MULTIPLE PRODUCTION

Redmer #000 Air Chuck mounts on all standard makes of rotary tables 16" in diameter or over. Can be used on tables 24" or over with standard REDMER chucks for greater holding power. Safely holds round, square or hex pieces. Using standard B & S Type collets eliminates fixture making.

Rotary valve available with required number of outlets and necessary off and on positions. Manufactured to specifications only as to diameter, height required and number of outlets.

Send for complete details, price list and complete catalog of all REDMER chucks.

REDMER AIR DEVICES INC.

Guntersville • Box NED • Alabama

▲ For more details circle NED-907 J9 on enclosed inquiry slip ▲

PERFORATED

METALS - PLASTICS - FIBRE BOARD

Make your selection from a large stock of standard perforating dies.

Round - Square - Slot
Perforated Grilles
Decorative Metals
Complete Decorative Panels
Screens for heavy road work
Screens for pulp and paper
Or let us design to your specifications.

National Perforating Corporation
42 Parker Street
Clinton, Massachusetts

▲ For more details circle NED-908 J9 on enclosed inquiry slip ▲

For PRESS STAMPING PRODUCTS WITH CURVED OR STRAIGHT LINE MARKING

PRESS STYLE **STEEL TYPE HOLDER**
MODEL PH-50

Body and press shank are one piece with flanges to hold type chase in position. Type chase with almost any size or number of characters can be removed and inserted without operator placing hands in press.

Write for Catalog 100

Mecco SAFETY MARKING TOOLS **M.E.CUNNINGHAM CO.**
1055 CHATEAU STREET, PITTSBURGH 33, PA.

▲ For more details circle NED-909 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

External Screw Threads Chart

Ohio Rod Products Co.—Wall or desk chart shows details of Unified and American external screw threads. Specifications from 0.060 to 1.0 in., thread symbols, allowances, and maximum and minimum diameters and pitch diameters are included.

▲ For more details circle NED-910 J9 on enclosed inquiry slip ▲

Variable Speed Drives

Sterling Electric Motors, Inc.—Various automatic and manual, remote and preset controls are available with Speed-Trol variable speed drives. Photos in 8-page Bulletin 195 show the modifications offered. Also detailed are applications, and information on horsepower, duty, mounting, enclosures, and speeds.

▲ For more details circle NED-911 J9 on enclosed inquiry slip ▲

Aerosol Sprays & Finishes

Illinois Bronze Powder Co.—Line of Illbronze push-button paints, aerosol specialties, aluminum and metallic coatings, Spray-O-Namel brushless paints, and decorative finishes are described in 8-page catalog. Also covered are metallic enamel colors, and industrial aluminum and metallic paint products.

▲ For more details circle NED-912 J9 on enclosed inquiry slip ▲

Spring Steels

National-Standard Co., Athenia Steel Div.—Annealed or tempered, bright, polished, blued, strawed, and scaleless forms of cold rolled spring steel, specialized and alloy steel, and cold rolled flat wire are available in thicknesses from 0.001 to 0.065-in. How these, and other products, of this company are made is described in 24-page brochure. Technical data are included in chart form.

▲ For more details circle NED-913 J9 on enclosed inquiry slip ▲

Cobalt Nickel Spring Alloy

Elgin National Watch Co., Abrasives Div.—Originally developed for watch main springs, Elgiloy cobalt nickel spring alloy now is being offered in springs of all types, drive bands, torsion bars, ball bearings, cable, and stamped and machined parts. Subject of 24-page handbook, it possesses high corrosion, fatigue, set, and temperature resistance, and is nonmagnetic. Its properties are evaluated.

▲ For more details circle NED-914 J9 on enclosed inquiry slip ▲

Rheostats, Pots, Resistors & Relays

Ohmite Mfg. Co.—The old Ohmite stand-bys—Brown Devils, Dividohms, tap switches, and relays—are described in illustrated Stock Catalog 30, along with a number of new components. Latter includes Model E miniature rheostat, 14 values in Type AB molded composition potentiometers, five Little Devil molded composition resistors, and extra heavy current Powr-Rib and Corrib resistors.

▲ For more details circle NED-915 J9 on enclosed inquiry slip ▲

NEW Gradient micro-Web **PULMOSAN G-W**

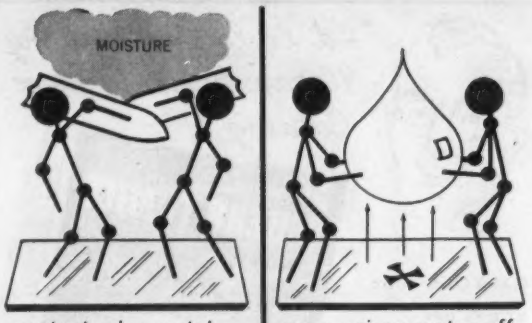
DUST FILTER for
• BETTER FILTRATION OF ALL DUSTS
U. S. Bureau of Mines approved for dusts not more toxic than lead and chromic acid mists.
• EASIER BREATHING
• LONGER FILTER SERVICE
A radically new disc-type filter with micro-web pores formed with an ultra-fine fibrous base. A great advance in filtering efficiency for all dusts — no advance in filter prices.

U. S. BUREAU OF MINES APPROVED

May be used with any Pulmosan U.S.B.M.-approved respirators. Write for full information.

PULMOSAN STOPS Pulmosan SAFETY EQUIPMENT CORPORATION
644 Pacific Street, Brooklyn 17, N. Y., STerling 9-0200
1007 Washington Ave., St. Louis, Mo., CHestnut 1-9393

▲ For more details circle NED-916 J9 on enclosed inquiry slip ▲



protects dry metal... even raises water off wet metal

POLARIZED
RUST VETO 377

Whether they are dry or dripping wet, precision finished metal parts can now be protected against rust with a thin, tough, almost invisible .0003" film of long-lasting, multi-purpose Rust Veto 377 that literally displaces moisture and clings to the metal for complete protection; even in damp, humid indoor conditions.

For full details about Rust Veto 377 send for NEW ILLUSTRATED BULLETIN. Write E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

• COSMOLINE • RUST VETO
Most famous names in rust prevention

products of... E. F. HOUGHTON & CO.
Ready to give you on-the-job service
Philadelphia, Pa. • Chicago, Ill. • Carrollton, Ga. • Detroit, Mich. • San Francisco, Calif. • Toronto, Canada

▲ For more details circle NED-917 J9 on enclosed inquiry slip ▲

Mark in color on any surface

felt tip
CADO-MARKER

The finest inexpensive industrial marker your money can buy!

Factory-filled with oil-based ink in choice of eight colors. Instant-dry – Waterproof – Permanent – Transparent

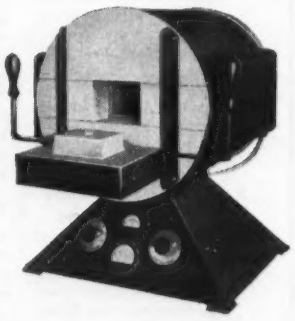
At stationers and marking equipment suppliers everywhere. For complete information, write to Dept. NED-9

CUSHMAN & DENISON
Manufacturing Company • Carlstadt, New Jersey

Refills available

▲ For more details circle NED-918 J9 on enclosed inquiry slip ▲

Hevi-Duty
"G-07-PT" FURNACE
temperatures to 2600° F.



This furnace is designed for high-temperature work where accurate control and uniformity are important. Controls, which provide 48 temperature gradients, and an indicating pyrometer are located in the pyramid base. For greatest uniformity in the heating chamber, three heating elements are installed over and three are beneath the refractory muffle.

Write for Bulletin 957 for full details.

Type	Watts	Chamber			Price
		W.	L.	H.	
G-07-PT	3500	4"	7"	2¾"	$585.00

*Operating voltage either 115 or 230 A.C. only.

HEVI DUTY ELECTRIC CO.
Milwaukee 1, Wisconsin

• LABORATORY FURNACES
TRADE MULTIPLE UNIT MARK
• ELECTRIC EXCLUSIVE

▲ For more details circle NED-919 J9 on enclosed inquiry slip ▲

Oil-resistant terry cloth work gloves by JOMAC®

Free sample pair will convince you . . . oil runs off these new Jomac gloves like water off a duck's back! Moreover, Oilmacs are far more cut-resistant than expensive leather gloves . . . are interchangeable . . . and can be reconditioned with virtually no loss in oil resistance. Write for free sample now . . . and you will soon start replacing those heavy, oil-soaked gloves with light, flexible Oilmacs!

JOMAC Inc., Department G, Philadelphia 38, Pennsylvania

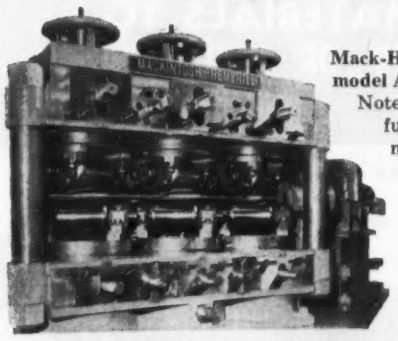
▲ For more details circle NED-920 J9 on enclosed inquiry slip ▲

Is your tubing ALMOST straight?

Why settle for almost straight, almost round pipe and tube when a Mack-Hemp Straightener gives you premium straightness and roundness every time in a single pass.

Mack-Hemp's open three-post rotary tube straightener is the most effective machine ever developed for finishing pipe and tube. It's rugged, yet easy to adjust . . . to maintain. It's easy to set the rolls, and easy to reset them for different tube diameters.

More important: It's versatile . . . fits into any tube or pipe mill production line. It's fast . . . all six rolls are driven for speeds up to 1,000 fpm and more. It's guideless . . . won't mar tubing surfaces. And there are thirteen models . . . for tube diameters ranging all the way from 1/16 inch to 16 inches.



Mack-Hemp three-post model AX straightener. Note how this clean functional design makes it easy to see and get at the rolls for adjustment and locking.

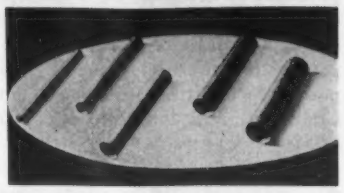
Learn more about the Mack-Hemp Straightener. Write for a free copy of our 24-page illustrated technical bulletin, "How to Straighten Pipe and Tube."

MACKINTOSH-HEMPHILL
Division of
E. W. BLISS COMPANY
901 Bingham Street • Pittsburgh 3, Pa.

▲ For more details circle NED-921 J9 on enclosed inquiry slip ▲

New Processes & Materials

FLEXIBLE METAL TUBING offered in several steels, bronze



Interlocked strips of 0.010 to 0.034-in. thick metal are used in construction of enlarged line of flexible metal tubing. Three grades are offered in bronze and galvanized, cold rolled, and stainless steels. Various sizes, weights, and metals are suited for dust and fume collectors, suction and blower hose, ventilating systems, armoring and shielding conduit, hot air duct, flexible spouts, and other uses. Made by **International Metal Hose Co.**, Bellevue, Ohio.

▲ For more details circle NED-922 J9 on enclosed inquiry slip ▲

MULTIPURPOSE CLEANER also sterilizes and deodorizes

With a phenol coefficient of 100, Alpenco multipurpose cleaner also sterilizes, deodorizes, and disinfects. It is effectively used to clean and sterilize goggles, respirators, masks, shields, shoes, boots, gloves, and other personal equipment, as well as toilets, wash basins, lockers, dispensaries, and for general mopping and cleaning. One ounce of the concentrate makes 1 gal of nonflammable, nonsolvent, and nontoxic solution. Trial sample is available from **Albert W. Pendergast Safety Equipment Co.**, 6924 Tulip St., Philadelphia 35, Pa.

▲ For more details circle NED-923 J9 on enclosed inquiry slip ▲

WIRE HARNESS TAPES flat-braided Dacron and nylon types

Good dimensional stability and heat resistance are offered by Ben-Har flat-braided lacing tapes for wire harnessing. Shrinkage of 0.002 per cent per 1° F rise in the Dacron type, and 0.004 per cent with nylon assures minimum harness distortion. Pliable tapes have good knotability and are easily handled without irritating the skin. Off-white color is furnished in 250 and 500-yd spools, or universal-wound ¼-lb tubes. Fives widths are from 3/64 to ¼ in. Tapes are also braided from Teflon-coated Fiberglas yarn. Made by **Bentley, Harris Mfg. Co.**, Conshohocken, Pa.

▲ For more details circle NED-924 J9 on enclosed inquiry slip ▲

HYDRAULIC

REMOTE CONTROL SYSTEMS

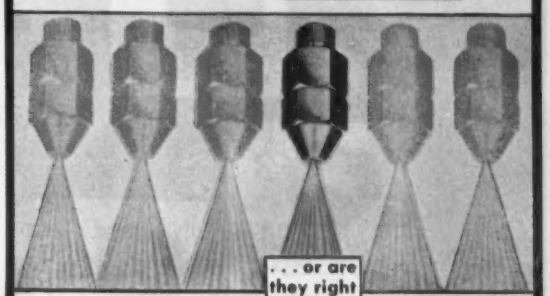
Completely self-contained . . . single tube . . . remote control eliminates use of compensators. Rugged and reliable . . . used in engine, machine tool and many other factory applications . . . wherever positive, accurate, instant duplication of movement is needed . . . no "sponginess."

EASILY INSTALLED

Sperry CONTROLS
HYDRAULIC REMOTE CONTROLS
Representatives in Principal Cities
SPERRY PRODUCTS, INC. • 1709 SHELTER ROCK RD. • DANBURY, CONN.

▲ For more details circle NED-925 J9 on enclosed inquiry slip ▲

Are the SPRAY NOZZLES you use in the grey zones . . .



. . . or are they right on the beam?

Like an electronic system, a spray nozzle system can be *tuned* for maximum performance. To do this select spray nozzles that *exactly* fit the system needs . . . in terms of capacity, spray characteristics and materials. The use of Spraying Systems spray nozzles keeps spraying installations out of the costly grey zones. The reason: you have a choice of over 12,000 *standard* nozzle types and capacities to match the nozzles exactly to your need.

FOR PROOF . . . write for Catalog No. 24.

SPRAYING SYSTEMS CO.
3211 Randolph St. • Bellwood, Ill.

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Standard For Industry

CENTURY Liquid Level SIGHT GAGES

- **Easiest Possible Installation on any wall thickness**
- **Large Face for Better Visibility—7" Overall**
- **Can be used with non-inflammable oil**
- **Leak-Proof — No Dripping**
- **For Better Service at Lower Costs, Start Using Century Gages Today**
- **Available Immediately — from STOCK**

Send for new catalog containing dimensional information on hydraulic reservoirs and complete line of power unit accessories.

CENTURY HYDRAULICS
Division of CENTURY-DETROIT
7701 LYNDON AVE. • DETROIT 38, MICH.
Telephone: Diamond 1-3797

▲ For more details circle NED-927 J9 on enclosed inquiry slip ▲

Dependable Accuracy . . . with TRERICE

DIAL THERMOMETERS

If you are after precise, dependable temperature indication, take a close look at these high-quality features of Trerice dial thermometers!

NEAT APPEARANCE, distinctive chrome-plated dial ring.

WIDE TEMPERATURE RANGES, available in both Fahrenheit and Centigrade dials, temperature ranges from -100° to 1000° F.

EASY TO READ, modern aluminum dial, large figures.

WIDE VARIETY, dial available in 2", 2½", 3½", 4½", 6", 8½" and 12" diameters with mercury, vapor, gas, solid liquid or bi-metal actuation.

All the many other standard and special option features of Trerice dial thermometers are contained in Bulletin No. 500-M. Write for your copy.

Send Bulletin 500-M.
Name .....
Address .....
City ..... Zone ..... State .....

H.O. TRERICE CO. 1424 W. Lafayette Blvd. Detroit 16, Michigan

▲ For more details circle NED-928 J9 on enclosed inquiry slip ▲

A. Typical commercial unsealed bakelite panel instrument. B. Sealed bakelite model for use in severe conditions of dust, humidity, or corrosive atmosphere. C. Ruggedized model designed to withstand high shock, severe vibration of military and other rough duty applications.

Using the engineering skill and design know-how that comes through long and valued experience...Federal Pacific's Instrument and Relay Division, Fifty Avenue L., Inc., carries on the tradition of quality manufacture built through half a century of progress as the Roller-Smith Corporation. For complete details, write for Bulletin 3-15, Federal Pacific Electric Co., Dept. 375, Newark 1, N. J.

FPE FEDERAL PACIFIC ELECTRIC COMPANY
The Best in Electrical Distribution and Control Equipment

▲ For more details circle NED-929 J9 on enclosed inquiry slip ▲

TWO MEN

from your regular plant crew

CAN MOVE YOUR HEAVIEST MACHINE

QUICKLY
EASILY
ECONOMICALLY

WITH...

MULTITON
ROLLER SKIDS
and suitable tractive power

The days of wasteful extravagant roller-bar moving are gone. With a set of MULTITON roller skids you can move any load up to 300 tons more quickly, more easily and at lower cost than by any method previously devised. The MULTITON roller skid lays its own track as it moves easily over smooth or uneven surfaces. . . . It will *swivel, turn, steer* and position heavy loads accurately in tight quarters.

LET US SHOW YOU how to slash moving costs and plant disruption. MULTITON skids will pay for themselves in ONE MOVE, and save thousands in the course of a year. Write for free catalog and 12-page booklet on *Modern Methods of Heavy Equipment Handling and Hauling.* A demonstration in your plant can be arranged—at no cost, of course. P.S. Ask about the Multiton Junior Kit for moving loads up to 6000 lbs.

STOKVIS MULTITON CORP.
Dept. NED-9, 18 Secatoag Ave.
Port Washington, N. Y.

▲ For more details circle NED-930 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

Screw Fasteners

Southern Screw Co.—Eight pages of list prices on packaged wood screws, Type A tapping screws, machine screws, machine screw nuts, stove bolts, and carriage bolts are contained in Catalog P-1. Back cover explains company's "EZ to C" label system which positively identifies the package through use of color, silhouette, and written description.

▲ For more details circle NED-931 J9 on enclosed inquiry slip ▲

Overhead Handling Equipment

Cleveland Crane & Engineering Co., Cleveland Tramrail Div. — Various types of carriers, cranes, tractors, track switches, grabs, and electrification are covered in 12-page Booklet 2008-0 which deals with overhead materials handling equipment. Detailed studies of track design, peening, and stresses are given. Photos show a wide variety of Tramrail installations.

▲ For more details circle NED-932 J9 on enclosed inquiry slip ▲

Viscosity Meter & Control

Bendix Aviation Corp.—Viscosity of plant processes is continuously measured, recorded, and controlled by the Ultra-Viscoson. Instrument probe can be mounted directly into a process pipeline or vessel at temperatures up to 650° F and from vacuum to 1000 psi. Line of instrument systems for measurement and control of liquid viscosity is introduced in 16-page brochure.

▲ For more details circle NED-933 J9 on enclosed inquiry slip ▲

Flame Hardening

Chicago Flame Hardening Co.—Economical method of getting hardness when and where required is afforded by flame hardening. Steels, cast iron, Meehanite, and nodular irons can be flame hardened by this company, whether they be in the form of machine ways, rolls, gears, dies, wheels, or other parts. Chart shows hardness ranges and depths.

▲ For more details circle NED-934 J9 on enclosed inquiry slip ▲

Putting Air to Work

Gast Mfg. Corp.—Forty-three case histories and photographs of original equipment installations which show the use of air motors, compressors, and vacuum pumps are found in 12-page idea Booklet APP-71. Twenty-four diagrams illustrate pneumatic principles used to perform a wide variety of functions.

▲ For more details circle NED-935 J9 on enclosed inquiry slip ▲

Selecting Worm Gear Sets

De Laval Steam Turbine Co.—Basic data needed for accurate selection of worm gear sets is provided by illustrated Catalog 3800. Delroyd worm gearing is detailed. Sections are included on design data, how to calculate bearing loads, and standard worm gears, double extended worm and mounting, and single and double extended worm shafts.

▲ For more details circle NED-936 J9 on enclosed inquiry slip ▲

NEW **Top Quality...Low Price**

FULLY HYDRAULIC
PALLET TRUCKS

ONLY
$350.00
(F.O.B. CHICAGO)

Now you can have quality at the lowest price of any hand operated, full hydraulic, fork-type Pallet Truck on the market. Designed to answer the majority of Pallet transportation problems, the 2,400 and 4,400 pound capacity Pallet Trucks are quality manufactured, extra-sturdy, yet light weight.

- SHORT WHEEL BASE
- ACCURATE STEERING
- 3¼" LOWERED HEIGHT
- EFFORTLESS OPERATION
- COMPACT
- 5" LIFT

ORDER BY MODEL NO.
MODEL BT 24 — 2400 lb. Cap. $350.00
MODEL BT 44 — 4400 lb. Cap. $395.00
Both models available in 20" and 27" widths; 36", 42" and 48" lengths. Specify when ordering.
Dealer Inquiries Invited

Write • Phone • Wire

INDUSTRIAL HANDLING EQUIPMENT CO.
1221-23 W. Monroe • Chicago 7, Ill. • MOnroe 6-8554

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NYLAFLOW® Flexible Pressure Tubing

Nylaflow's outstanding performance, easy installation solves tubing problems, cuts costs

NYLAFLOW—a tough, flexible polyamide tubing—offers an unmatched combination of desirable properties for lubrication, hydraulic, pneumatic and other lines. Available in burst strengths of 1000 and 2500 psi. in various diameters and lengths, NYLAFLOW finds ready use in many different industries. With consistent high Polymer quality, it gives you these unique advantages:

• High pressure rating at low cost • Will not embrittle in storage • Wide temperature range: low —100°F; high +225°F • Odorless, tasteless, non-toxic, fungus resistant • Resists flex and vibration fatigue • Resists abrasion and impact

Get the full story. *Write today* for new BR-3 booklet to:

THE POLYMER CORPORATION OF PENNA.
Reading, Pa.

POLYPENCO

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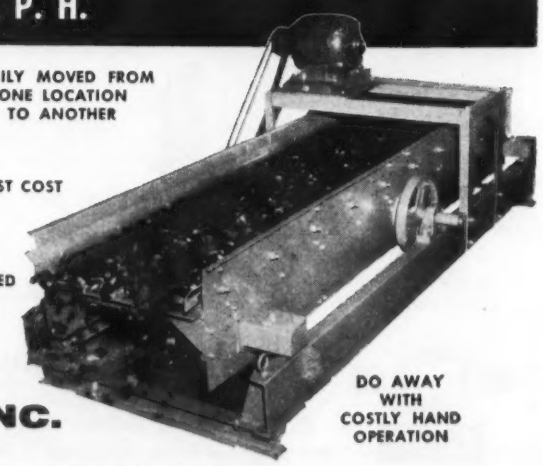
Q. WHERE CAN A MIGHTY-MITE VIBRATING SCREEN SAVE MONEY FOR YOUR COMPANY?

A. WHEREVER YOU HAVE MATERIALS TO BE SCREENED, DEWATERED, DEDUSTED OR RECLAIMED IN LOW VOLUME UP TO 15 T. P. H.

SINGLE AND DOUBLE DECK MODELS PROVING PROFITABLE IN HUNDREDS OF INDUSTRIAL ASSIGNMENTS

All over America, in hundreds of plants you'll find Mighty-Mite vibrating screens on the job. These well-engineered, low-first-cost screens save time, save labor by doing a multitude of screening jobs accurately. Whatever you have to screen, dedust, dewater or reclaim in low volume (up to 15 T. P. H.) it will pay you to do it with a Mighty-Mite.

SEND FOR BULLETIN NO. 12 TODAY.



SCREEN EQUIPMENT CO., INC.
BUFFALO 25, NEW YORK

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KEEP PNEUMATIC CONTROLS FROM CLOGGING

Dollinger Staynew Filters "capture" all dirt, oil droplets, and moisture . . . allow only clean dry air to pass into delicate controls of transmitters, amplifiers, recorders, etc.

Staynew Model CPHB-4D offers peak efficiency (5-6 microns) at pressures to 150 p.s.i., temperatures to 100°F. Made of lightweight, durable die-cast aluminum . . . bracket provides easy installation . . . single bolt assembly for easy maintenance.

Available for ¼", ⅜", and ½" pipe connections. See your local Dollinger representative, or write for engineering data sheet. Dollinger Corporation, 49 Centre Park, Rochester 3, New York.

STAYNEW FILTERS — DOLLINGER

Specializing in dry type filters for 35 years

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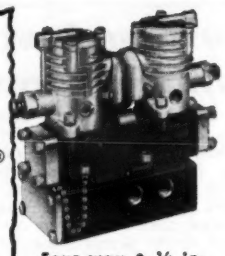
Lower assembly and maintenance costs with

SPEED KING®

Plug-in Control Valves



Four-way • ¼ in. NPT • sub-base or manifold mounting • ac or dc, any voltage (illustrated with optional manual override).

With SPEED KING plug-in valves, permanent piping and wiring connections are made in the sub-base or manifold at assembly. Then, valves and pilots are plugged in . . . bolted down. Built-in plugs complete electrical circuits automatically!

For faster assembly . . . simplified piping and wiring . . . quick in-service maintenance . . . multi-million cycle dependability . . . specify SPEED KING plug-in control valves.

Coils guaranteed against burn-out for the life of the valve.

Valvair AKRON 11, OHIO

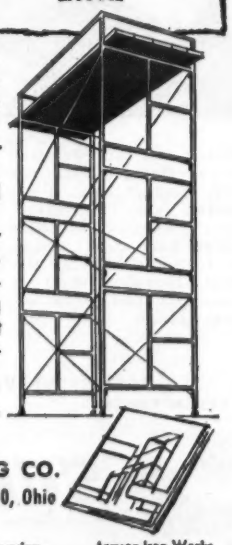
Other INDUSTRIAL DIVISIONS of IBEC: The Sinclair-Collins Valve Co. The Bellows Co., Akron, Ohio • V. D. Anderson Co., Cleveland, Ohio.

8020

▲ For more details circle NED-941 J9 on enclosed inquiry slip ▲

WACO SCAFFOLDING

The COMPLETE SCAFFOLDING LINE



Waco . . . the complete line of scaffolding, offers you one-source convenience and service for all scaffolding needs.

Waco scaffolding, with patented job-proven *Speedlock* is the fastest, most economical scaffolding available.

Check the yellow pages for your on-the-spot Waco Distributor. He stocks light and heavy-duty steel scaffolding, rolling towers, and the accessories that assure you fast, safe, economical maintenance equipment.

Send for complete information.

WACO Dept. N MANUFACTURING CO. 5251 West 130th St. Cleveland 30, Ohio

LICENSEES: Tubular Structures Corp. of America, Los Angeles, California — Armon Iron Works, Windsor, Ontario

▲ For more details circle NED-942 J9 on enclosed inquiry slip ▲

New Processes & Materials

PLASTIC FLOOR RESURFACER
resists acids, oil, alkali, and wear

Suited for both patching and resurfacing, Metal-Tite restores worn or disintegrated concrete floors, loading docks, driveways, and similar areas. This two-component material consists of proper proportions of plastic steel mixture and a converter. After mixing, it is trowelled on clean, dry surface and dries to a durable surface that withstands heavy trucking and traffic, as well as acids, alkalies, oil, water, and most chemicals. It has high shear and compression strength. Made by **Dasco Chemical Co.**, 1602 Thames St., Baltimore 31, Md.

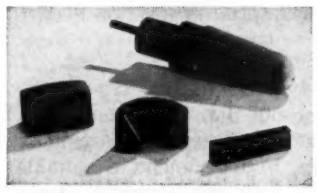
▲ For more details circle NED-943 J9 on enclosed inquiry slip ▲

EXTRUDED VINYL FOAM
many shapes and colors offered

Protective packaging, permanent gasketing, and dust seals are but a few of the applications for Cipco Foam, an extruded vinyl foam material. Many profile shapes and colors can be produced. Standard line of round continuous lengths is offered in ⅛ to 1-in. diameters on a production basis. Made from Goodrich Geon vinyl resin, the material has high strength and resists abrasion, flame, heat, and rot. Made by **Essex Wire Corp.**, Caroline Industrial Plastics Div., Mt. Airy, N. C.

▲ For more details circle NED-944 J9 on enclosed inquiry slip ▲

CARBIDE FOAM INSULATION
porous material withstands 4000° F



Nuclear reactors, furnace insulation, missiles, and nonferrous metallurgy are expected applications of silicon carbide foam, a lightweight, corrosion resistant insulating material with high porosity. Easily machined with standard cutting tools, it can be fabricated into complex shapes with close tolerances. The self-bonded silicon carbide with open cellular structure performs as a thermal insulation up to 4000° F. A cubic foot of low and high density foam weighs only 16 to 18 and 30 to 35 lb, respectively. The latter is capable of supporting 800-psi loads. Coatings provide abrasion and erosion resistance for the inner, lighter cellular material. Sizes up to 13 x 20 in. are being produced, Made by **Carborundum Co.**, Research & Development Div., Box 337, Niagara Falls, N. Y.

▲ For more details circle NED-945 J9 on enclosed inquiry slip ▲

technical components — GRC molded in engineered thermoplastics

GRC now producing tiny parts in DELRIN

New DuPont Thermoplastic with Metal-Like Qualities Makes POSSIBLE NEW TINY COMPONENT APPLICATIONS thru GRC Precision ENGINEERED MOLDINGS

DuPont's new acetal resin, DELRIN, with mechanical properties equalling metals in many ways—while excelling in corrosion resistance, resilience, non-conductivity, and other important factors, is NOW available from Gries in tiny parts engineered to precision tolerances.

Successful techniques for production-line molding of DELRIN have been developed by GRC, the result of our two years' pioneering—and another industry dividend deriving from GRC's long experience in injection molding thermoplastics to exacting specifications. The reliability of Gries procedure for DELRIN fabrication is proved by long production runs on parts like those shown here.

For other service requirements, let Gries' experience in injection molding of Nylon, Cycolac, Kel F, and other Engineered thermoplastics solve your problems on tiny parts with precision specs. Send prints for quotation—quantity from 25,000 to millions. **Maximum size .03 oz.—1¼ long. No size too small.**

Write today for DELRIN data & literature on GRC Automatic Molding Services

GRIES

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N.Y. • NEw Rochelle 3-8600

▲ For more details circle NED-946 J9 on enclosed inquiry slip ▲

FLAMELESS HEAT BLOWER

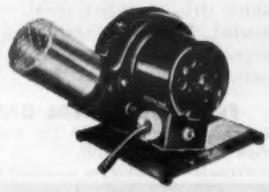
FOR QUICK HEAT UP TO 1000° F.

For applications requiring quick concentrated heat blast up to 1000° F. without flame. Soften, form, mold and patch plastics, etc. Temperature varied by air intake adjustment. 110-120 V. AC-DC motor, 8 ft. heavy duty cord. Intermittent duty. $37.50.

Other models available with lower temp. ranges

Most of the big names in industry use MASTER in laboratories or in production

AIR HEATER BLOWER



For quick electrically heated air up to 500° F. For accelerating drying processes or for localized heating. B.T.U. 3400. Air velocity 2000 FPM. 110-130 V. AC only. 8 ft. heavy duty cord. Continuous duty. 2" dia. x 3" long discharge nozzle.

Order through your local laboratory or industrial supplier or direct.
500° F.—1000 Watts $37.50
500° F.—1400 Watts $39.50

MASTER Appliance Corp., Racine, Wisconsin

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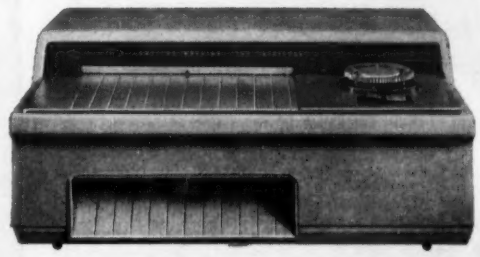
Speed your copying jobs



Only "Thermo-Fax" Copying Machines do so many office jobs so quickly, so easily, for so little cost!

Count on a "Thermo-Fax" Copying Machine to speed work flow throughout the office or plant. It copies a business paper or production form in just 4 seconds—by the only completely electric, completely dry, completely clean copying process.

Yet this versatile machine is more than a speedy communicator. It's also a low-cost billing machine, accounting machine, addressing machine, labelling machine. You'll use it to speed work, cut costs, in several of your present work systems. For full facts call your local dealer, or mail the coupon.

Thermo-Fax COPYING MACHINES — 3M

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Company _____
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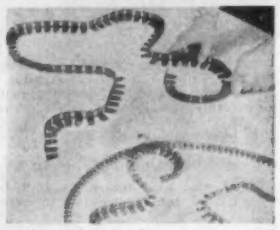
▲ For more details circle NED-948 J9 on enclosed inquiry slip ▲

. . . with ACROFLEX, the PLIABLE, NOTCHED STEEL STRAPPING



Your maintenance department will find Acroflex as handy as nails and wire. You'll use it to fabricate guards on all dangerous points of moving machinery. Acroflex consists of a series of angular connected links in 8′ or 10′ lengths, with each link pierced to reduce drilling when used with wire mesh or expanded metal. Used for fastening metal to metal, metal to wood, or wood to wood at right angles in numerous shapes.

FREE ADDITIONAL DATA is contained in this folder. Write for your copy today. Ask for bulletin A59.

Territories available for qualified representatives.

ACRO METAL STAMPING COMPANY
340 E. Reservoir Ave., Milwaukee, Wis.

▲ For more details circle NED-953 J9 on enclosed inquiry slip ▲

LIGHT WHEN YOU NEED IT

. . . automatically with F-P controls

Fisher-Pierce photoelectric lighting controls automatically turn on lights in parking lots, railroad yards, docks, loading areas, storage and security areas—whenever daylight drops to preset turn-on setting—regardless of weather or time of day. Turn-on setting is adjustable, never needs re-setting; various models available with turn-on from 1 to 500 f.c. Easy to install, housed in weatherproof watt-hour meter case. Reliability and ruggedness proven by ten years of use.
Standard Model 63300C switches lamp loads up to 3000 watts, special model switches 6000 watts; SPST, SPDT or DPST power contactors. For 105-130 or 210-250V, 50/60 cycles. For larger loads, control can be used with low-cost F-P Type 250A Multiple Relays. Bulletin on request. Write The Fisher-Pierce Co., 86 Pearl Street, So. Braintree 85, Mass.

FISHER FP PIERCE
PHOTOELECTRIC LIGHTING CONTROLS
AN AFFILIATE OF SIGMA INSTRUMENTS, INC.

▲ For more details circle NED-954 J9 on enclosed inquiry slip ▲

For Extra Dexterity *AND* Chemical Protection Specify Super-Flexible V-20

Made of Rugged, Extremely Flexible Pylox™ — to provide greater finger dexterity and chemical resistance than most other medium weight industrial gloves.

Pioneer Stanflex V-20 gloves provide excellent liquidproof hand protection in up to 50% solutions of nitric and chromic acid, plus many other inorganic acids, alkalis, oils, greases, and solvents.

Send for PIONEER'S *FREE* Foolproof Glove Selector

The PIONEER Rubber Company
234 Tiffin Road, Willard, Ohio
Gentlemen:
Please send me:
☐ New "Foolproof Glove Selector" by Pioneer
☐ 1959-60 Pioneer Industrial Glove Catalog
☐ 17" x 22" Full Line Glove Wall Chart
Firm _____
Address _____
City _____ Zone ____ State _____
Requested by _____

▲ For more details circle NED-955 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

Multipurpose Metal Framing

Unistrut Products Co.—Unistrut all-purpose metal framing is adjustable, reusable, and requires no special tools or fastening methods. Design details, available forms, specifications, and much application data are offered in comprehensive 68-page illustrated Catalog 700. It can be used for pipe hangers and clamps, framing, storage racks, light fixture hangers, and many other purposes.

▲ For more details circle NED-956 J9 on enclosed inquiry slip ▲

Guide to Handling Equipment Selection

Lewis-Shepard Products, Inc.—Quick visual reference to types of materials handling equipment is provided by equipment selector chart contained in 16-page Catalog 80-204. Covered are electric rider fork lift trucks, rider tractors, narrow aisle rider trucks, walkie trucks, and manual equipment. Condensed specifications are included.

▲ For more details circle NED-957 J9 on enclosed inquiry slip ▲

Small Machine Tools

Rockwell Mfg. Co., Walker-Turner Power Tool Div.—Drill presses, grinders, cut-off machines, band saws, and belt and disc surfaces are subject of 48-page Catalog WT-50-9. Specifications are given for the new 17-in. drill press, 2½-in. belt grinder, and 20-in. band saw and butt welder, as well as for other tools.

▲ For more details circle NED-958 J9 on enclosed inquiry slip ▲

Designing with Gearing

Illinois Tool Works, Spiroid Div.—Spiroid gears have more teeth in simultaneous contact than any other right angle gears, according to the 36-page Engineering Manual "Lower Cost Design Begins with Spiroid Gears." Prime applications are in the field of medium or high ratio right-angle gearing. Ratings, selections, center distances, bearing loads, mounting methods, and other data will aid in application design.

▲ For more details circle NED-959 J9 on enclosed inquiry slip ▲

Worm Gear Jacks

Duff-Norton Co.—Filling out the application analysis form in 8-page illustrated Bulletin AD-66a enables engineers of this company to recommend a suitable worm gear jack model for your requirements. Jacks can be built into machines and equipment. Specifications of eight jacks in the 1800 Series are given. Capacities range from 2 to 100 tons.

▲ For more details circle NED-960 J9 on enclosed inquiry slip ▲

O-Rings Up to Date

Auburn Mfg. Co.—Engineering data and reference table that simplify selection, installation, lubrication, and maintenance of O-Ring seals are available for reference in comprehensive booklet. Physical and mechanical considerations of O-ring selection are outlined. Materials, machining, and finishes that are compatible with this type of seal are covered.

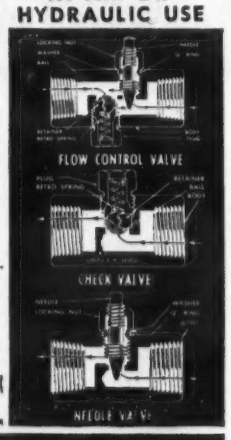
▲ For more details circle NED-961 J9 on enclosed inquiry slip ▲

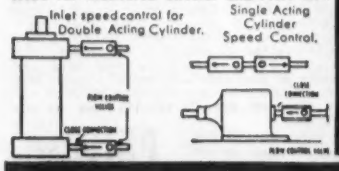
Get Easier, More Accurate Cylinder Speed Control with Pneu-Trol® VALVES IN AIR OR HYDRAULIC USE

2,000 (brass or aluminum) and 5,000 (steel) p.s.i.

Pneu-Trol Valves combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to seat, requiring only a slight differential pressure to fully open or close it. Check Valve and Needle Valve incorporate single function features of Flow Control Valve. All valves available in 5 female pipe sizes — ⅛" to ¾". Valve bodies are made from brass, aluminum, steel or stainless steel. Attractive Prices — Immediate Delivery.

Write for Illustrated Circular and Price List.

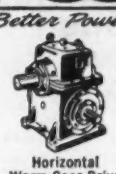




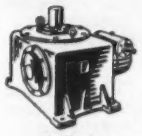
2929 GRANT STREET
BELLWOOD (Chicago Suburb) ILLINOIS

▲ For more details circle NED-962 J9 on enclosed inquiry slip ▲

FOOTE BROS.
Better Power Transmission Through Better Gears


Horizontal Worm Gear Drive

"Hytop" Helical-Worm Gear Drive


Vertical Double Worm Drive

Worm-Helical Overhead Conveyor Drive

HYGRADE WORM AND WORM-HELICAL REDUCERS

Heavy duty enclosed units available in a wide variety of sizes, ratios and shaft arrangements. Designed to combine maximum load carrying capacity with minimum center distances. Extra strong cast housings, precision cut gearing, oversize bearings are just a few standard HYGRADE drive features. Single worm, helical-worm and double worm reductions. Ratios up to 4108:1; capacities up to 260 HP.

Catalog HGB has complete details and selection data. *Write for your copy.*

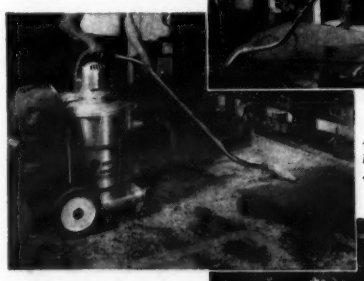
FOOTE BROS. GEAR AND MACHINE CORPORATION
4569 South Western Boulevard • Chicago 9, Illinois

▲ For more details circle NED-963 J9 on enclosed inquiry slip ▲

Cutting Cost with a Sanitary Cleaner

● There are so many cost cutting jobs you can do with this big new Super Model RS-1. Especially designed for industry, it provides quick recovery or transfer of liquids, fast pick-up of chips, debris, etc. The quick detachable head can be carried about for blowing and limited suction work. For massive pick-up through 2 in. or 3 in. hose, special cast aluminum cover for use on standard 55 gal. steel drum permits mounting two Super power heads on one drum. Write for the specifications of this amazing and versatile machine. Or ask your local Super distributor.

Quick recovery of spilled liquids ➤



Fast cleanup around machine tools ➤

Complete recovery from machine sump ➤

Cleans offices, conference rooms, interiors of all kinds ▼

Easy to keep overhead equipment clean ▼

Motor and fan exclusive Super design and our own manufacture. Push button hose connection. Short sturdy handle. Large fixed rear wheels or 4 caster base as desired. Stainless steel or enameled steel container. Anti-mildew filter bag.

The National Super Service Company
1958 N. 12th St. Toledo 2, Ohio

"Once Over Does It"
SUPER SUCTION SERVICE®
Power Suction Cleaners • Quality Floor Machines
SINCE 1911
"THE DRAFT HORSE OF POWER CLEANING MACHINES"

▲ For more details circle NED-964 J9 on enclosed inquiry slip ▲

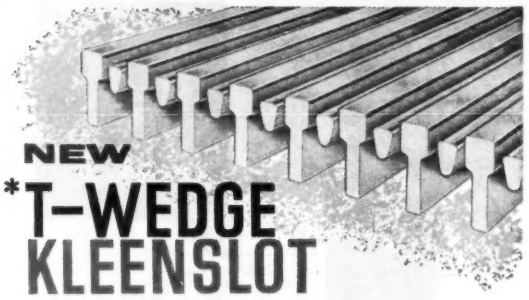
"ADJUSTABLE STROKE" MIDGET
Air-Clamp* CYLINDER
*TRADEMARK

Now—put pressure where it's wanted instantly and cheaply, with Mead's powerful new midget air cylinders (1" bore, single-acting, spring return—horizontal and vertical). Stroke is adjustable. Cut costs—use 'em singly or in groups to move, hold, press or eject small work pieces; to close and open large jigs, forms, fixtures. They'll replace human fingers and mechanical clamps in countless routine jobs.

Catalog Free!
Write for new fact-and-picture-packed Air Power Catalog—or ask your nearest Mead Man!

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., DEPT. NA-99
CHICAGO 41, ILLINOIS
PATHFINDER IN AIR POWER AUTOMATION

▲ For more details circle NED-965 J9 on enclosed inquiry slip ▲



NEW
*T-WEDGE KLEENSLOT
(preparation screen)

"T" and "WEDGE" wire combine to create the ultimate in...

GUARD BAR DESIGN –high "T" profile wire between every wedge shaped wire performs as guard bar *and* screen

GUARD BAR ECONOMY –new design effects added screening surface, small screen efficiency with large screen life

with *I.F.A.—*independent flexing action*

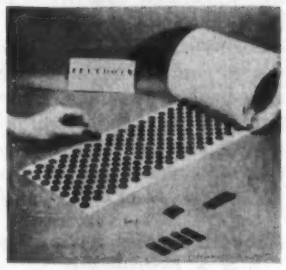
Especially adaptable for flumes or vibrator applications — can easily be interchanged with other types of Kleenslot screens without mechanical changes — abrasion resistant stainless steel
patent applied for
for additional information—write

WEDGE-WIRE CORPORATION
Wellington, Ohio

▲ For more details circle NED-966 J9 on enclosed inquiry slip ▲

New Processes & Materials

SELF-ADHESIVE FELT
for cushioning and insulating



Enlarged line of self-sticking felt tape, tabs, and dots now includes a 1/8-in. thick brown color and 1-in. diameter felt dots and washers. These self-adhesive felt products are usable for a wide range of applications, including cushioning, silencing, insulating, and dust-proofing in furniture, appliances, business machines, and other products. The 1/8-in. felt is available in brown, white, taupe, and gray, and mothproofed in brown, gray, and taupe. Standard 3/64 in. thicknesses are made in brown, white, green, beige, and black, mothproofed in brown only. Dots and washers range from 1/4 to 1 in. diameter, tape from 1/8 to 2 in. wide, and tabs from 9/32 in. square to 3/16 x 1 3/16 in. Special sizes and shapes can be made to order by **J. B. Dawn Products Co.**, 3905 S. 64th Place, Chicago 29, Ill.

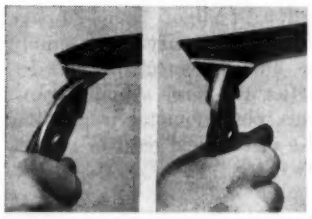
▲ For more details circle NED-968 J9 on enclosed inquiry slip ▲

FLUOR-ELASTOMER CEMENT
bonds Viton rubber to itself, metal

Resistant to fuels and chemicals up to 500° F, Cohrlastic C-328 RTV fluoro-elastomer cement vulcanizes at room temperature and will bond Viton rubber to itself and to metal. It is a two-part product originally developed for field repair of Viton rubber fuel cells. Cement can also be used to line tanks and similar equipment. In high solids concentrations, potting, patching, and sealing applications are possible where fuel and chemical resistance is needed. Sample kit is available for $6. Made by **Connecticut Hard Rubber Co.**, 407 East St., New Haven 9, Conn.

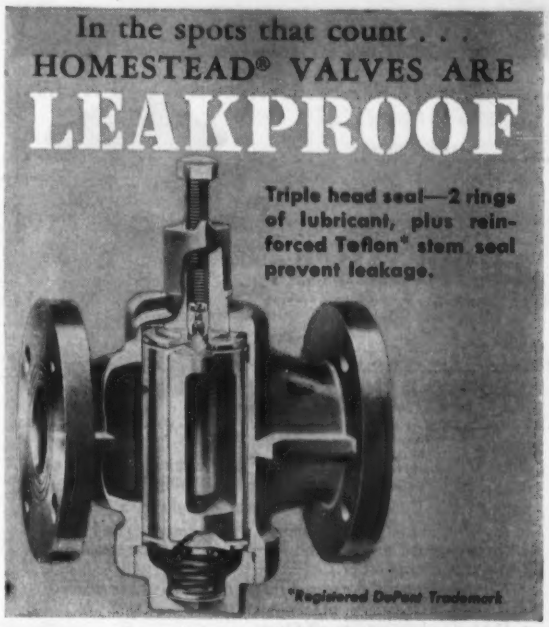
▲ For more details circle NED-969 J9 on enclosed inquiry slip ▲

MOLYBDENUM SHEET
high ductility eases fabrication



Pure molybdenum metal sheet in thicknesses from 0.025 to 0.125 in. can be bent at right angles or doubled upon itself at room temperature. The high ductility product is suited for punching and deep drawing operations. Thick sections can be formed by Hydroforming techniques in which heat cannot usually be used. Available in commercial quantities from **General Electric Co.**, Lamp Metals & Components Dept., Nela Park, Cleveland 12, Ohio.

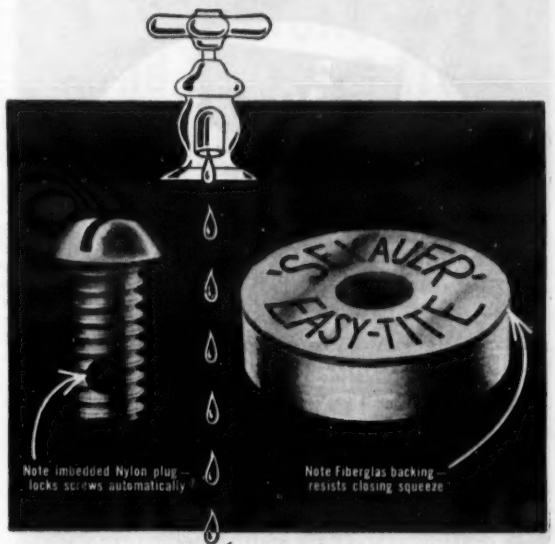
▲ For more details circle NED-970 J9 on enclosed inquiry slip ▲



Controlled, pressurized lubrication system forces full lubricant seal around ports, and over all sealing surfaces—positively prevents sticking. Write today for full details.

HOMESTEAD VALVE MANUFACTURING COMPANY
P.O. Box 84 • Coraopolis, Pa.

▲ For more details circle NED-971 J9 on enclosed inquiry slip ▲



New Way to Stop Faucet Leaks!

★ 9-in-10 washers are fastened with TOO LONG or SHORT SCREWS thus loosen and destroy themselves. Leaks quickly follow!

34 YEARS OF RESEARCH REVEALS NEW SOLUTION

★ New, patented 'Sexauer' SELF-LOCK screws have imbedded expanding NYLON PLUG. They lock at required depth AUTOMATICALLY, hold washers firmly! Made of MONEL, they are rustproof, non-corroding. Heads can't twist off. Screw slots can't distort.

★ NEW, improved 'SEXAUER' EASY-TITE faucet washers are made of super-tough, pliable du Pont compound (not rubber or fibre). Reinforced with a vulcanized layer of Fiberglas, they resist distortion and splitting from shut-off grind and squeeze.

★ Faucet leaks repaired with 'Sexauer' EASY-TITE faucet washers and SELF-LOCK screws outlast ordinary repairs "6-to-1"!

HIDDEN COSTS OF FAUCET LEAKS!

Hackensack, N. J. Water Co. and American Gas Association figures prove stopping just ONE PIN-HOLE SIZE (1/32") LEAK saves you 8,000 gal. water quarterly. A HOT WATER FAUCET LEAK repair saves you over $7.58 QUARTERLY in fuel and water bills. Fewer leaks also produce important savings on MATERIALS, LABOR and COSTLY FIXTURE REPLACEMENTS!

A 'Sexauer' Technician will make available our NEW Catalog, Edition "J", listing our entire line of over 3,000 TRIPLE-WEAR plumbing repair parts and tools. He will survey your fixtures, determine the repair parts needed and establish an efficient stock arrangement and control to prevent costly overstocking or shortages. You get this service without obligation. *Act now!*

J. A. Sexauer Mfg. Co., Inc., Dept. AU-99
2503-05 Third Ave., New York 51, N.Y.
Please send me a copy of your NEW Catalog "J"
Name _____ Title _____
Organization _____
Bus. Address _____
City _____ Zone _____ State _____

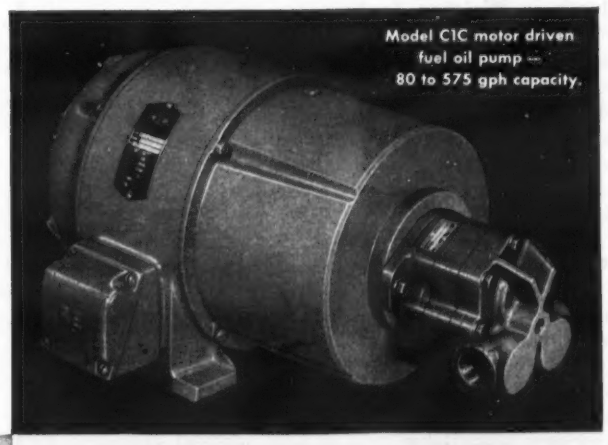
SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

▲ For more details circle NED-972 J9 on enclosed inquiry slip ▲

Webster fuel oil handling equipment

**from tank to burner—
a complete line for all commercial and industrial applications**

Problems in handling fuel oils? High lift, big capacity, heavy No. 5 and No. 6 grades? Webster has the answer in a full line-up of pumps—supply, transfer, booster and burner models. Choose from direct drive or belt-driven units—in a wide capacity range. Webster pumps are compact, install with a minimum of plumbing. With each you get a full measure of dependable operation to match the most rugged and demanding service.


Model C1C motor driven fuel oil pump — 80 to 575 gph capacity.

RV-2000 fuel oil regulating valve
For all fuel oils — No. 1 through No. 6. Combines pressure regulation and cut-off. Capacities up to 100 gph. Pressure ranges — 80 to 150 psi, 90 to 250 psi.

call the man from Webster
— or write for engineering bulletins FU3-1, FU3-2, FU3-3

HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

▲ For more details circle NED-967 J9 on enclosed inquiry slip ▲

filter tips on processing

LUBRICANTS AND HYDRAULIC OILS

The P92 Purolator Micronic Filter Series is a line of small, full-flow industrial filters for general lube work and hydraulic systems. Features include:

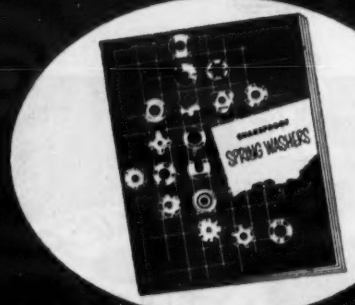
- The Micronic® Filter element . . . resin impregnated cellulose, preformed and pleated for greater filtering area. (10 times that of any other.)
- Relief valves and corrosion-resistant parts, where needed.
- Handy, easy-to-use replacement element package.
- Mounting brackets on all filters.

Send for details and data, or write us the particulars of your problem. We'll be glad to help. Write Dept. P11-97.

Filtration For Every Known Fluid

PUROLATOR PRODUCTS, INC.
RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

▲ For more details circle NED-973 J9 on enclosed inquiry slip ▲



SEE the complete Shakeproof line!

SPRING WASHERS by SHAKEPROOF

Free! Write today for this catalog . . . contains full description and specifications on a wide variety of types and sizes of spring washers.

SHAKEPROOF
"Fastening Headquarters"®
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois

▲ For more details circle NED-974 J9 on enclosed inquiry slip ▲

CARBON BRUSHES *in themselves may be somewhat prosaic . . .*

BUT

THE PROBLEMS *they evoke can be very alluring . . .*

WE'D LIKE TO PIT OUR EXPERIENCE AGAINST YOUR PROBLEM

Meanwhile, we'd be glad to send you a copy of our monograph, "Get the Most Out of Your Carbon Brushes." Into it has gone some of our 40 years' experience. Write today.

SUPERIOR CARBON PRODUCTS, INC.
9115 George Avenue • Cleveland 5, Ohio

Since 1919 Superior CARBON BRUSHES

▲ For more details circle NED-975 J9 on enclosed inquiry slip ▲

New Literature & Catalogs

Standard Power Tools

Rockwell Mfg. Co.—Delta Power Tool Div.—Sixty-five illustrated case histories in the "Blue Book" tell how Delta power tools are used in combination with other tools, with automatic controls, and in special setups to combine or automate operations. The 66-page case book is arranged in five sections covering single and multiple spindle drill presses; automated drill press setups; and special setups such as cutoff machines, radial saws, and hand screw machines.

▲ For more details circle NED-976 J9 on enclosed inquiry slip ▲

Acoustical Measuring Instruments

B & K Instruments, Inc.—Amplifiers, analyzers, deviation bridges, megohmmeters, microphones, oscillators, recorders, strain gages, surface roughness meters, vibration pickups and voltmeters are among test instruments listed in 24-page Short Catalog ES-8. They comprise a line of units for automatic measurement of sound, vibration, and strain.

▲ For more details circle NED-977 J9 on enclosed inquiry slip ▲

Magnetic Disc Brakes

Dings Brakes Inc.—Dings direct-acting magnetic disc brakes are offered in torque ratings from 1½ through 175 lb-ft for motors from 1/6 through 50 hp. They can be installed anywhere a shoe brake is used, as well as where appearance and space are considerations. They find application on machine tools, cranes, hoists, conveyors, index mechanisms, and overhead doors. Bulletin BK-4005 provides complete details.

▲ For more details circle NED-978 J9 on enclosed inquiry slip ▲

Servo Clamps

Sterling Precision Corp.—Complete line of servo clamps diagrammed in pocket-size 48-page Catalog 50 includes items for surface mounting motors, potentiometers, synchros, and other servo components of all known sizes. Shaft sizes range from 1/16 through ⅜-in. diameter, including some threaded and Swing-Away types. They are used for attachment of split hub gears, dials, couplings, differentials, and other split hub arrangements.

▲ For more details circle NED-979 J9 on enclosed inquiry slip ▲

Electromechanical Breadboard Parts

Beckman Instruments, Inc., Helipot Div.—24-page Catalog 575 describes all parts necessary for assembly of complicated gear trains and servomechanisms. Included are typical schematics and basic synchro transmitter and receiver systems, potentiometer transmitter and receiver systems, and a mechanical resolver system.

▲ For more details circle NED-980 J9 on enclosed inquiry slip ▲

Photoelectric Controls

General Electric Co.—Virtually all counting, sorting, signaling, protecting, diverting, detecting, and limiting jobs can be performed by line of easy-to-use photoelectric controls. Detailed in 16-page illustrated Bulletin GEA-6822 are various relays, smoke density indicator, electronic timer, cut-off register control, and side register control. Light beam range is from 2 to thousands of feet.

▲ For more details circle NED-981 J9 on enclosed inquiry slip ▲

Aluminum Welding Techniques

Techniques of welding aluminum using Aircomatic gas-shielded metal-arc and Heliweld tungsten-inert gas processes are covered in 120-page spiral-bound book. Selection of the proper process for certain uses, equipment descriptions, and safety practices are among subjects. Request on company letterhead from Air Reduction Sales Co., 150 E. 42nd St., New York 17, N. Y.

▲ For more details circle NED-982 J9 on enclosed inquiry slip ▲

New Uses for Pipe

Tube-Strut Corp.—How many industrial fixtures, such as racks, benches, booths, rails, shelves, carts, and stands, can be constructed from ordinary pipe by using a simple universal clamp is shown in 10-page Guide TSA-5. Assembly directions are given. Tube-Strut universal clamp which allows for every structural requirement is available in ½ to 2-in. nominal pipe sizes.

▲ For more details circle NED-983 J9 on enclosed inquiry slip ▲

Chart of Conversion Factors

Precision Equipment Co.—Such common conversions as inches to centimeters, watts to horsepower, cubic feet to liters, and others difficult to locate in reference manuals are provided on this Wall Chart of Conversion Factors. Other examples include atmospheres to Kgs/sq cm, cm/sec to mph, and microns to meters.

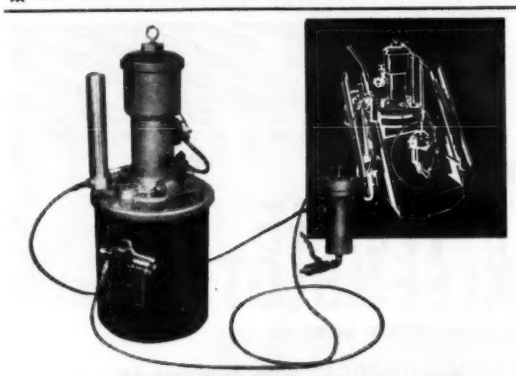
▲ For more details circle NED-984 J9 on enclosed inquiry slip ▲

NEW MATERIAL INTAKE VALVES INSURE SMOOTH FLOW OF MATERIALS IN PROCESSING INDUSTRIES

Material intake valves to insure the uninterrupted flow of materials through all types of high vacuum pneumatic systems are available for the first time from the U. S. Hoffman Machinery Corp. Suitable for use on 2 inch through 6 inch pipe lines, these material intake valves can be used for the removal or transport of any dry, free flowing, powdery or granular materials. Equipped with standard 8 inch flanged connections, they permit simple and rapid installation on bins, hoppers and dust collectors. Connected equipment is protected from exposure to the full suction of the vacuum system by a separate air inlet and material intake rate can be adjusted while air is flowing. The thorough mixing of air and material insures the smooth flow of materials.

For information on applications and installation in your plant write without cost or obligation to U.S.Hoffman Machinery Corp., Air Appliance Division, Dept. EM, 103 Fourth Avenue, New York 3, N. Y. *Advt.*

▲ For more details circle NED-985 J9 on enclosed inquiry slip ▲



HydraAirless 20

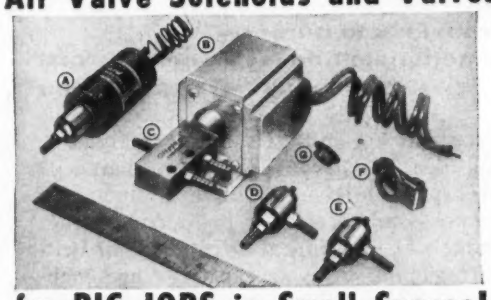
The newest, most versatile airless spraying system on the market!

Big, powerful motor and all-new 20-to-1 ratio pump combine to make the finest airless spraying unit available today. Overspray is virtually eliminated. Now it is possible to spray in open areas without the conventional spray booth. Material savings as much as 40%. The Model 20-1 illustrated above is the basic, unheated airless system of the HydraAirless 20 line. Other models combine this unit with the famous Spee-Flo heater and exclusive Recirculating System (Pat. Pend.) for uniform temperature and viscosity control. All models available in fixed or mobile units for 5- or 55-gallon requirements.

For information on the complete line of HydraAirless 20 systems and accessories write for Catalog Sheet PM 918. Spee-Flo Co., 6614 Harrisburg, Houston 11, Texas.

▲ For more details circle NED-986 J9 on enclosed inquiry slip ▲

NEW MIGHTY MINIATURE Air Valve Solenoids and Valves



for BIG JOBS in Small Spaces!

- Ⓐ D.C. AIR VALVE SOLENOID for 12 or 24-volt operation
- Ⓑ A.C. AIR VALVE SOLENOID for 115 volt operation (other voltages available)
- Ⓒ 4-WAY AIR VALVE (MAV-4) 5.3 CFM at 50 psi
- Ⓓ 3-WAY AIR VALVE (MAV-3) 4.5 CFM at 50 psi
- Ⓔ 2-WAY AIR VALVE 4.5 CFM at 50 psi
- Ⓕ CAM FOLLOWER HEAD for automatic valve cycling
- Ⓖ MANUAL PUSH BUTTON for fingertip valve operation

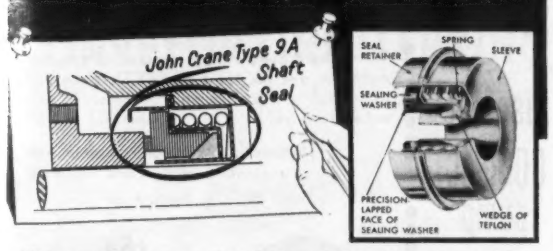
Clippard Minimatics TRADE MARK

Write, NOW for NEW BULLETIN No. 4-59

Clippard INSTRUMENT LABORATORY, INC.
7390 Colerain Rd., Cincinnati 39, O. • Phone: JAckson 1-4261
Manufacturers of Miniature Pneumatic Devices, R.F. Coils, Electronic Equipment

▲ For more details circle NED-987 J9 on enclosed inquiry slip ▲

Sealing Corrosive Liquids Starts Here...



This cartridge-type production line shaft seal is engineered for:
(1) positive sealing of many industrial chemicals and solvents (note the Teflon* sealing wedge);
(2) leakproof handling of inflammables and toxics;
(3) operation over a wide temperature range from −120° to +500°F., pressures to 150 psi.

It offers the Original Equipment Manufacturers these important advantages:
- low unit cost;
- fast, one-piece installation;
- equal efficiency on both low or high speed applications.

The 9A Shaft Seal can be of stainless steel, monel, brass or other materials adapted to stamping and forming—depending on the service requirement.

Get full details. Request Bulletin S-205-3. Crane Packing Co., 6411 Oakton Street, Morton Grove, Illinois (*Chicago Suburb*).
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.
**DuPont Trademark*

CRANE PACKING COMPANY
OFFICES IN ALL PRINCIPAL CITIES
▲ For more details circle NED-988 J9 on enclosed inquiry slip ▲

MAKE YOUR OWN CRANE...
...at a NEW LOW COST!

Handle loads up to 2000 lbs., SAFELY, easily... Buy crane beam locally—we furnish the rest... A pair of self-aligning, ball bearing Flexo-Crane trucks cost only..... $96.00
Simple instructions come with shipment.

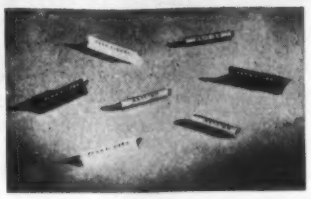
Complete Flexo-Crane, with hoist and accessories, is also economically priced. To get full details, ask for—
BULLETIN F-114

The Abell-Howe Line includes a wide range of overhead cranes monorails, hoists and accessories.

ABELL-HOWE COMPANY 7747 VAN BUREN ST. FOREST PARK, ILL.
▲ For more details circle NED-989 J9 on enclosed inquiry slip ▲

New Processes & Materials

TEFLON TUBING
indelibly printed with code numbers



Teflon flexible, instrument, heavy - walled, and spaghetti tubing can be indelibly printed with identification coding to meet any requirement. Code imprint will not fade, chip, or peel off. Printed flexible tubing is available in 1/8 to 1 1/8-in. ID; spaghetti tubing, from AWG 0 to AWG 32; instrument tubing, from 0.010-in. through 1-in. ID; and heavy walled tubing in standard commercial sizes. Special shapes or monograms can also be printed. Additional services include cutting to specific lengths. Offered by **Pennsylvania Fluorocarbon Co.**, 1115 N. 38th St., Philadelphia 4, Pa.

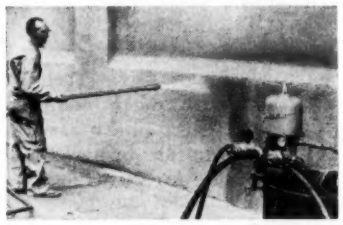
▲ For more details circle NED-991 J9 on enclosed inquiry slip ▲

PLASTIC CONCRETE
exceptionally strong, resists impact

Up to eight times stronger than concrete, Perma-Crete plastic compound, resembles concrete in appearance. It bonds tenaciously to almost any surface, resists abrasion and wear, is waterproof, and resists most acids, alkalies, and solvents. It will not shrink, and withstands extreme point loading without breaking. Product can be used to resurface broken floors, for floors in food and chemical plants, and to surface steel ship decks or catwalks for nonskid qualities. Water absorption reportedly is 1/150 that of concrete. Made by **Surface Engineering Co.**, 1535-39 Barwise Ave., Wichita 1, Kans.

▲ For more details circle NED-992 J9 on enclosed inquiry slip ▲

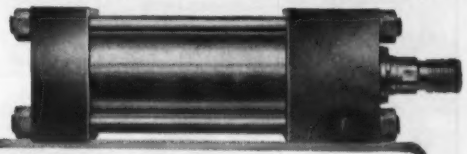
LIQUID METALLIC COATING
reduces building temperature



Insulating properties of aluminum are combined with the decorative beauty of outside paint in Aluma-Chron coating recommended for cement block constructions, asbestos cement siding, quonset buildings, and metal cribs and tanks. It provides a vaporproof barrier, is impervious to moisture, and reflects the sun's rays to reduce summer building temperature. Product also rustproofs. With 40 psi and 1/4-in. nozzle opening, Aluma-Chron can be sprayed at rate of 6000 sq ft in 8 hr. Coverage runs from 50 to 100 sq ft per gal, depending on surface. Made by **Pace Products, Inc.**, 1609 Washington St., Kansas City 8, Mo.

▲ For more details circle NED-993 J9 on enclosed inquiry slip ▲

NEW! HANNA Powrdraulic HYDRAULIC CYLINDERS
2000 psi • 3000 psi non-shock • 1½" through 8" bore



FEATURING:
★ Pressure tightening tube seals.
★ One piece steel heads with welded mountings.
★ Double seal piston rings.
★ Fast change cartridge gland.
★ Lubricated rod bearing.

MEET J.I.C. HYDRAULIC RECOMMENDATIONS. HAVE INDUSTRY STANDARD MOUNTING DIMENSIONS.

Write for Catalog 900 →
Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT • CYLINDERS • VALVES • RIVETERS
1759 Elston Avenue • Chicago 22, Illinois
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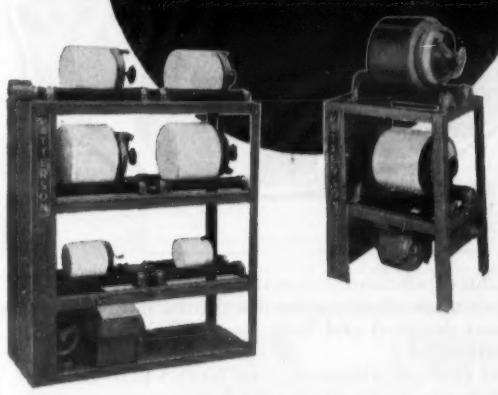
For LABORATORY and SMALL BATCH mixing and grinding

• STURDY
• LOW COST
Patterson Dura-Mills



Patterson DURA-MILLS offer top values in quality, simplicity, safety and operating convenience at low cost. Fully portable, compact, with welded frames and extra powerful roller chain drives, these modern jar mills are smooth-running, keep jars always centered on the rollers, and have oversize Oilite bearings. Wide range of models. Details in free bulletin.

Special alumina-content high fired porcelain jars give twice the wear of ordinary jars—far less contamination per batch.
½ pint to 6½ gals.

THE Patterson FOUNDRY AND MACHINE COMPANY
A Division of Ferro Corporation
East Liverpool, Ohio
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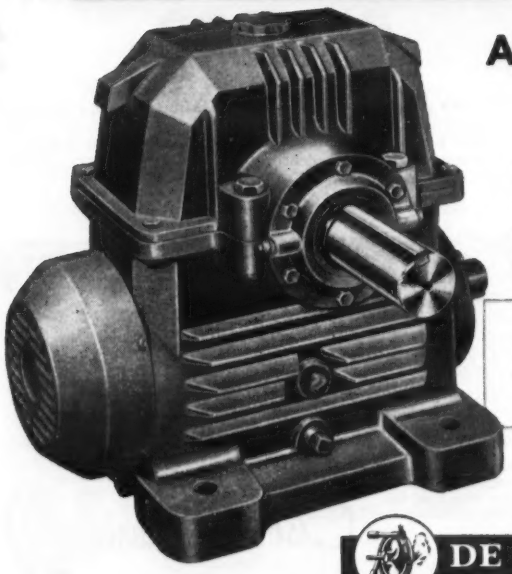
DELROYD
SPEED REDUCERS



De Laval Announces All New Line of Single Reduction Speed Reducers

New Delroyd single reduction speed reducers are available in a wide range of sizes and horsepower ratings. These worm gear units include centrifugally cast gears and fan cooling, and carry *the new AGMA ratings.*

DELROYD
TYPE B
fan cooled 5" through 12"
center distance

Send for this New 32-page Bulletin 3805 today. →

DE LAVAL Steam Turbine Company
907 Nottingham Way, Trenton 2, N. J.
DL-479A
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Available in Stainless Steel, Silicon Bronze, Brass, Aluminum and Steel

JACOBSON NUT MFG. CORP. Kenilworth, New Jersey

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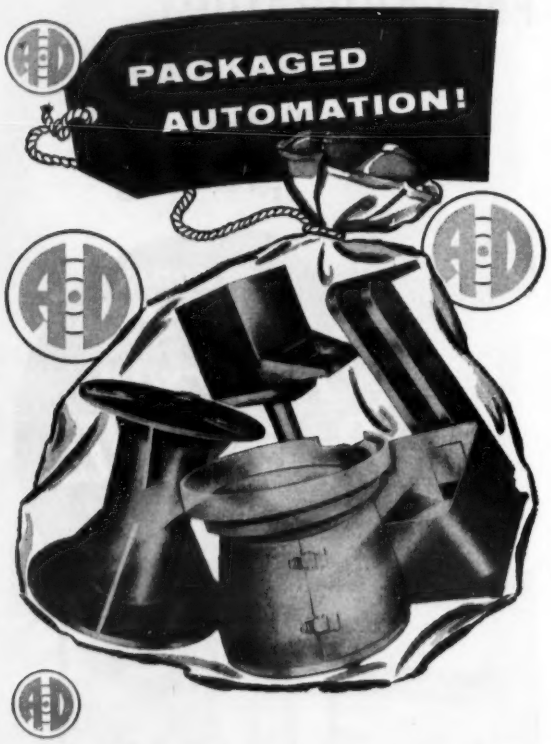
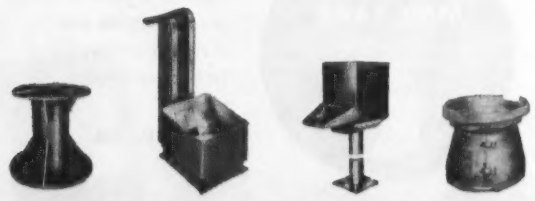


Achieve efficient, automatic production, and produce more all along the line, by integrating equipment designed and built by AUTOMATION for automation.

For example, vibratory parts feeders perform more efficiently on an engineered base permitting maximum power transmission. Either the side delivery or the elevating conveyor supply hoppers (with automatic paddle type relay switch to regulate delivery) hold large quantities of parts and are real labor savers. These are just a few advantages that make automation work and pay for itself.

You can depend on the proven talents at AUTOMATION DEVICES, INC.—enlist their help. Write today for the informative bulletin on "Packaged Automation."

PEECO & VFC DIVISIONS . . . TWO GREAT NAMES IN PARTS FEEDING



AUTOMATION DEVICES INC.
ERIE, PENNSYLVANIA

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New Literature & Catalogs

Vinyl-Metal Laminate

Arvin Industries, Inc. — Abrasion, chemical, and weather resistance of vinyl sheeting is combined with the strength, rigidity, and formability of metal in Arvinyl metal laminate. Plastic is bonded to various gages of steel, aluminum, and magnesium, and is offered in 36 to 50 in. widths, according to 8-page illustrated brochure. Application, fabrication, and technical data are included.

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Eyelets & Eyeleting Machines

Many fastening problems in metalworking, rubber, plastics, electrical, apparel, paper, and other industries can be solved with eyelets, offered in many standard sizes and materials. Special ones can also be made. The fasteners, their uses, and the machines that apply them are subjects of 48-page Catalog EM210-16. Request on company letterhead from United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.

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Overhead Conveyors

American MonoRail Co., Conveyor Div.—Capacities of 80, 160, and 250 lb per trolley are available in Cable-Way overhead conveyors, pulled by a continuous cable, and driven by powered sprocket wheels. This handling system and the Chainless conveyor with eight-wheel trolleys connected by steel rods are described and illustrated in 16-page catalog. Latter type has 100 to 400-lb capacity per trolley.

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Automatic Plant Waste Disposal

Wandel Machine Co.—The Somat waste disposal system takes in plant refuse, garbage, and paper waste, chews it into a finely ground and compacted pulp, then renders it odorless, and discharges it into haul-away containers. Economics and details of the system are presented in 12-page illustrated brochure. Case histories provide documentation.

▲ For more details circle NED-1001 H9 on enclosed inquiry slip ▲

Gearmotors

Hewitt-Robins, Inc., Jones Machinery Div.—Technical information on horizontal and vertical mounted gearmotors with capacities up to 125 hp and a variety of output speeds from 780 to 1.2 rpm are furnished in 32-page Bulletin J-17. Gearmotors are made in all-motor and integral types.

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Roller Bearing Guide

Detailed engineering data are provided in 104-page Catalog SF-90 on RBC roller bearings. Highlights include special bearing applications and a brief account of company's history and facilities. Request on company letterhead from Roller Bearing Co. of America, Sullivan Way, West Trenton, N. J.

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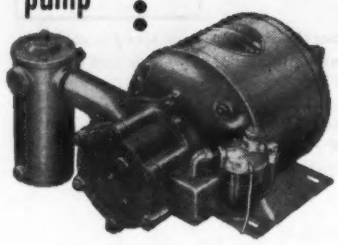
NEED VACUUM?

use the COMPACT pump

The Motoair Pump is built integral with its own motor to take the least amount of space and to avoid extra assembly necessary with separate drive.

Automatic lubrication complete with re-circulating system and visible oil reservoir is a feature of

the MOTOAIR®



Instantaneous suction and positive action is provided with the Motoair, being directly driven at the same rpm. as the motor.

ASK FOR CATALOG with performance data on various sizes of pumps Oil-less models also available.

824

NEW JERSEY MACHINE Corporation

FACTORY SALES AND SERVICE BRANCHES
CHICAGO, CINCINNATI
LOS ANGELES

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Cleveland Forge Works . . . Finish-machines to your specifications
Cleveland Forge Works . . . Modifies stock forging to your design
Cleveland Forge Works . . . Offers broad facilities in forging, machining, and finishing from a single source

For catalog 19-A and complete facility information, write *Forge & Fittings Division, H. K. Porter Company, Inc., 3270 East 79th Street, Cleveland 4, Ohio.*

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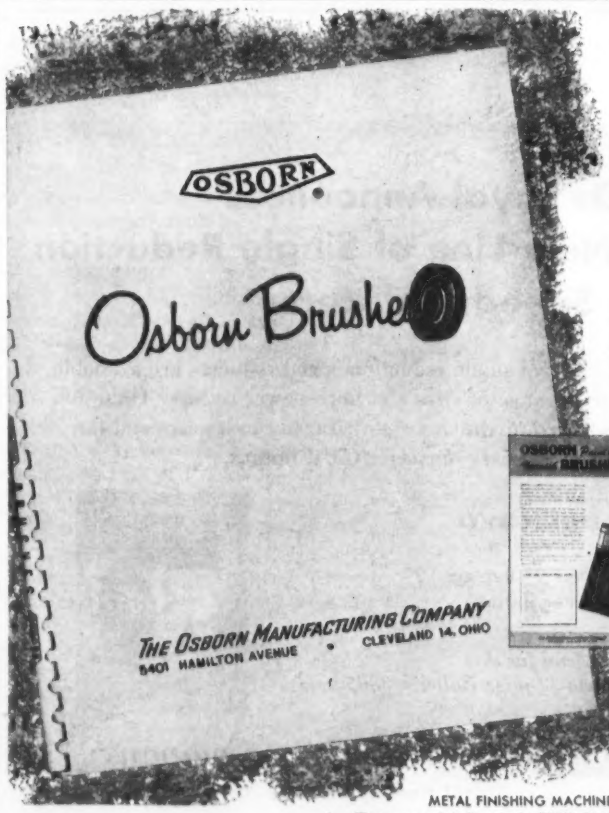
PORTER SERVES INDUSTRY with 12 DIVISIONS including: Thermoid, Delta-Star Electric, National Electric, Riverside-Alloy Metal, Refractories, Connors Steel, Vulcan-Kidd Steel, Forge and Fittings, Disston, Leschen Wire Rope, Mouldings. H. K. Porter Company de Mexico, and H. K. Porter Company (Canada) Ltd.

▲ For more details circle NED-1006 H9 on enclosed inquiry slip ▲



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. . . filled with practical, easy-to-use application data and specifications on the complete quality line of Osborn *power . . . paint . . .* and *maintenance* brushes. A handy guide to thousands of industrial brushes and how to get the most out of them. Write to *The Osborn Manufacturing Company, Dept. N-11, Cleveland 14, Ohio.*

TYPICAL PAGES of handy specifications and how-to-use data from the new Osborn Catalog.

Osborn Brushes

POWER, PAINT AND MAINTENANCE BRUSHES
METAL FINISHING MACHINES . . . AND FINISHING METHODS • FOUNDRY PRODUCTION MACHINERY

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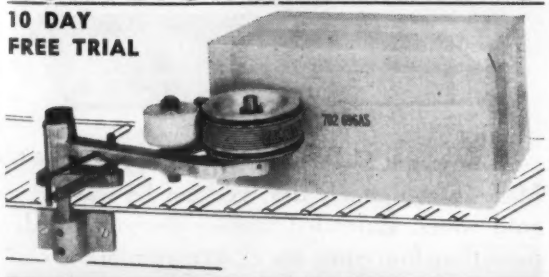
10 DAY FREE TRIAL



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- Trouble free, non-stop "friction" operation—self inking
- Interchangeable rubber type. Easy-to-read impressions. Quick copy changes
- Surprising low cost—saves expensive hand marking or large inventories of pre-printed cartons
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IMPRINTS CODING DATES, DATA ON:
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- BAGS
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- CANS
- DRUMS

etc., etc.

PRYOR MARKING PRODUCTS
434 S. Wabash Ave., Chicago 4, Ill.

For more details circle NED-1007 H9 on enclosed inquiry slip

from paper to steel a *Dillon* UNIVERSAL TESTER *will test them all!*

Whether you are working with metal, plastics, wire, rubber, springs, etc., an inexpensive DILLON Tester will make *hundreds* of accurate checks daily in your shop. Universal! Operates in tensile, compression, transverse or shear. Handles round, flat or special shapes. Two different machines – Model M for low strength materials between 0 and 300 lbs., and Model L for materials up to 125,000 lbs. PSI tensile. Hand wheel operated or motorized. Wide range of gripping fixtures.

Model L at right shown on stand. 7 interchangeable gauges provide wide range. All equipped with max. indicator. Model M at left is pendulum type. Has 5 scales. Meets ASTM & Fed. specs.

Write TODAY for brochures and LOW price schedule.

MODEL L

W.C. *Dillon* & CO., INC.
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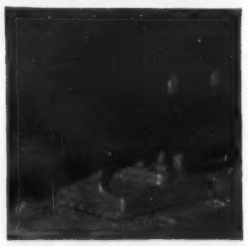
VIBRA-CHECK

The proved anti-vibration machine pad

Available only from Lowell Industries and its licensed agents



VIBRA-CHECK isolates vibration by three fused layers offering seven different natural frequency combinations as vibration barriers. It absorbs 90% of a machine's vibration.

Vibra-Check is a unique material constructed of tough elastomeric vinyl plastic reinforced with fiberglass. It has a very high co-efficient of friction, eliminating the need of using bolts or cement. Installation is easy, and quick. Vibra-Check is strong: 7500 psi breaking strength, and can be re-used when relocating machinery. It is impervious to oils, greases and other chemicals.

Vibra-Check is being used successfully in the machine tool, printing, textile, woodworking, laundry equipment and packaging industries, on all types of machines from 100 lbs. to 100 tons. May be carried in stockroom sheets, 22" x 23", and easily cut to foot size of machine as needed.

Vibra-Check is field tested, proven in service. Experienced Lowell Industries engineers have solved many special vibration problems—they can solve yours. Mount your machines the modern way, and eliminate vibration.

LOWELL INDUSTRIES, INC.

Send for literature . . . and free sample pad.

LOWELL INDUSTRIES INC.
ESTABLISHED 1938
Subsidiary of H. F. Livermore Corporation
BOSTON 34, MASSACHUSETTS

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New Processes & Materials

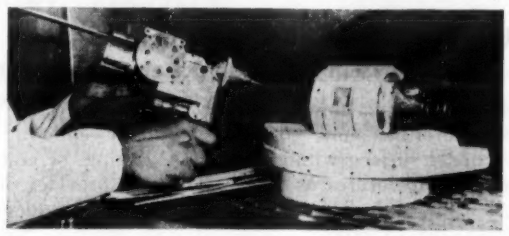
HIGH STRENGTH ADHESIVE bonds phenolic sheet to metal

Excellent aging properties and resistance to water, gasoline, and temperatures up to 250° F are reported for Bostik 7026 adhesive. It has high tensile strength in bonding metals or glass, and is effective with ceramics and cured phenolic, urea, and melamine molded plastics. When heat cured, shear strength is up to 4950 psi. Made by **B. B. Chemical Co.**, 784 Memorial Dr., Cambridge, Mass.

For more details circle NED-1010 H9 on enclosed inquiry slip

SPRAYED CERAMIC COATING for metal, plastic, and glass withstands heat up to 4500° F

Uniform, accurately controlled coatings of alumina, zirconia, zirconium silicate, and chromium oxide can be sprayed onto steel, plastic, aluminum, glass, and



numerous alloys by the Norton Rokide process. The 0.003 to 0.100-in. thick coatings are highly refractory, chemically inert, extremely hard, resistant to erosion, and are good thermal insulators.

Ceramic rods are heated by oxyacetylene flame to a molten state, sometimes up to 5000° F, then are sprayed on the material to be coated by an air blast. Resulting coatings withstand heat up to 4500° F, are flexible, withstand thermal shock, and have a wide range of applications. Process is available on a custom application basis or can be licensed. Contact **Coors Porcelain Co.**, 600 Ninth St., Golden, Colo.

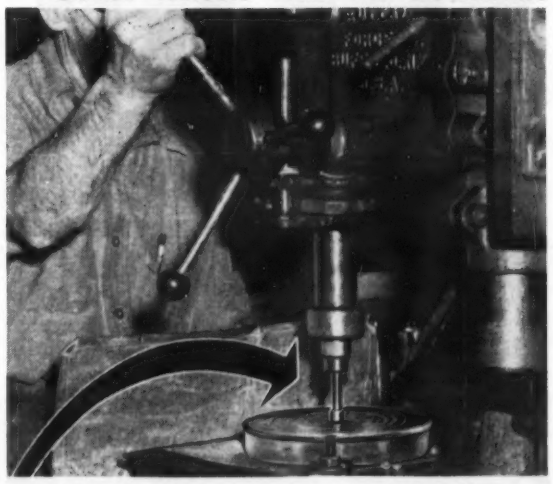
For more details circle NED-1011 H9 on enclosed inquiry slip

METALLIC ROOF COATINGS reflect 70 per cent of sun's rays

Practically any type of weather-exposed surface can be insulated, decorated, and preserved by Temp-Trol alkyd-base metallic roof coatings. White, green, gray, red, and blue colors are offered. Applied with brush or special spray gun, coatings remain reflective and give excellent service in industrial areas. They resist attack by chemicals and fumes. Alcoa aluminum pigments reflect up to 70 per cent of sun's rays. Temp-Trol can be used on asphalt and composition shingles, slate, metal, tar paper, stucco, concrete, cement, and cinder blocks. Made by **Sapolin Paints Inc.**, 205 E. 42nd St., New York 17, N. Y.

For more details circle NED-1012 H9 on enclosed inquiry slip

One Hoffman Bit Drills Up to 15,000 Godet Wheels With No Downtime



Up to 15,000 Godet Wheels drilled with center hole tolerance 1.5 min. to 1.53 max.—with one Hoffman Laboratory Bit. Actual production figures that are being duplicated by many Hoffman Bit users for precision drilling of glass, ceramics, quartz, etc. Diamond impregnated or oriented surface set.

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SINCE 1902
106 Cedar Street PUNXSUTAWNEY, PENNA.

For more details circle NED-1013 H9 on enclosed inquiry slip

R-W 458 trolleys offer many exclusive and important features . . . features that will pay off through improved service and trouble-free operation with a minimum of upkeep.

For the conveying of light loads, heavy loads or "tow cart" installation, R-W 458 Chain Conveyors provide the ideal method to speed-up production, lower operating costs and achieve a profit-improvement. R-W 458 Chain Conveyors are easy and economical to install, operate and maintain . . . may be added to existing systems. All components, while designed to meet industry standards, are manufactured to conform with R-W's strict quality control procedures that assure you of receiving dependable, long-life service and trouble-free operation. Write today for additional information . . . request your free copy of catalog No. A-570.

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BUY DIRECT! SAVE AT PALLEY'S

NEW PALLEY HYDRAULIC CYLINDERS – Here are two of our newly developed line of double action Industrial Hydraulic Cylinders. These cylinders are designed to meet the most rigid requirements of industry. All are heavy duty steel construction.

Type (A) is a heavy duty, press type cylinder with bores of 3", 5", 6" and 8" – thrust range up to 75 TONS at 3000 PSI.

Type (B) is an internal cap type cylinder with bores of 1½", 2", 2½", 3", 3½" and 4". Has strokes from 2" to 48". Delivers up to 18,850 lbs. thrust on 1500 PSI line pressure.

For complete listing of our tremendous stocks and prices – Send for our Special Hydraulics Catalog.

VICKERS HYDRAULIC ANGLE PUMPS

Save up to 50% on these Piston type, positive displacement Hydraulic Pumps. Made to top Government Specifications.

Part No.	G.P.M.	PSI	RPM	Price
H-P4A	5.3	1000	3000	$22.50
H-P5A	2.7	1500	3000	25.75
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A 3000 PSI Bendix ball type Accumulator. Top condition.
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2000 PSI Ball ACCUMULATORS
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GRAVITY CONVEYOR
Has 500 lb. per ft. cap. 12" wide curved steel frame. 5 rows of 2" diameter, 5/8" face, ball bearing steel wheels. Each unit will lock to next. Has 45° curve. NEW!
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1500 PSI Double Action HYDRAULIC CYLINDER NEW
Good for clutch or throttle control when used as a master & slave. Has 5/8" bore, 4-1/8" stroke, 7/16" shaft, 9-5/8" closed length. 1/4" tube ports (7/16–20 thread).
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NEW 3-TON SPUR GEAR CHAIN HOIST 17.950
WORTH $300
Army type with spur geared block. Constructed of steel & malleable iron. Chain drive. Use wherever an overhead trolley hoist is needed. Will handle up to 3 TONS. Model 41. Made by Chester White Mfg. Weight: approx. 540 lbs. Unused, good cond.

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palley's 2263 E. Vernon Ave. Dept. NED-99 Los Angeles, Calif.

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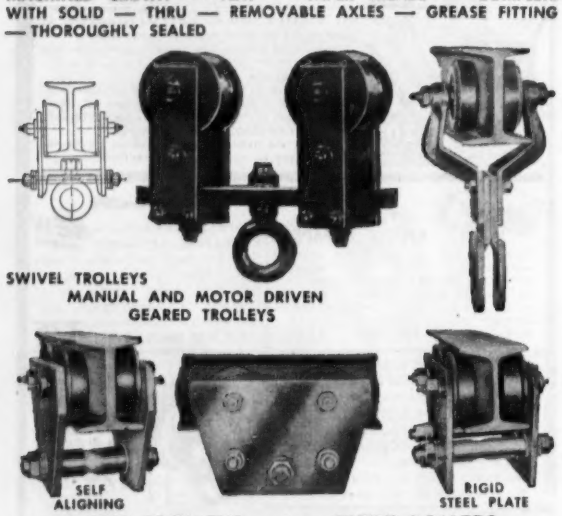

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STANDARD AND SPECIAL PRODUCTS BY GREY HUB ARE USED BY LEADING MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT IN EVERY INDUSTRY

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MANUFACTURERS SINCE 1921
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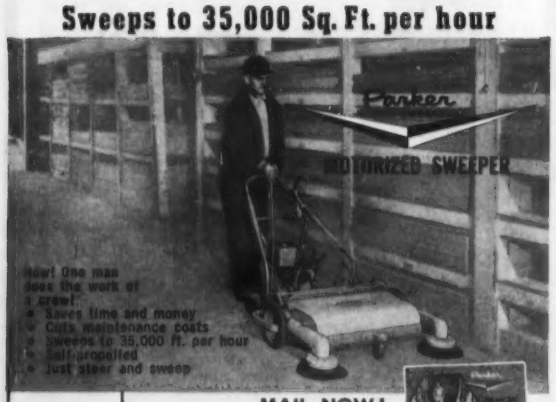
Maintenance Costs
Sweeps to 35,000 Sq. Ft. per hour



TURBO SWEEP . . . Dust-free sweeping at low cost. Sweeps 50,000 ft. per hr.

MANUAL . . . Easy to maneuver around boxes, crates, in aisles. 20" and 28".

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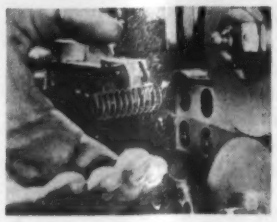
New Processes & Materials

COBALT SPRING WIRE operates from 400 to 1400° F



Precipitation hardened HS 25 or L-605 alloy spring wire is suited for forming springs to operate at ambient temperatures from 400 to 1400° F. It is made principally of cobalt, chromium, tungsten, nickel, and carbon, and is available annealed to a 35 per cent reduction. Wire drawn to a typical 30 per cent reduction is available in 0.171 to 0.018-in. diameter. Tensile strength for this reduction range is from 200,000 to 240,000 psi. Wire is supplied for automatic coiling with a gray oxide finish that is removed by nitric acid, tumbling, vapor blasting, or other methods. Made by **National-Standard Co.**, Niles, Mich.

▲ For more details circle NED-1021 H9 on enclosed inquiry slip ▲

RUST PREVENTIVE protects metals for 3 years outdoors

Hard, nontacky film formed by Charcool No. 1720 rust preventive and corrosion inhibitor adheres to any metal surface without checking, flaking, or cracking at temperatures as low as 0° F. It provides protection for up to 3 years on all metals stored outdoors. Formulated to protect uncovered dies, machine tools, jigs, and fixtures, it retains its homogeneity in solution over a −40 to 130° F range. Labels will adhere to the dry brown film. Made by **American Charcoal Co.**, 201 S. Green St., Detroit 17, Mich.

▲ For more details circle NED-1022 H9 on enclosed inquiry slip ▲

ETCH RESISTANT COATING aids chemical milling of metals

Light-sensitive Metal-Etch Resist can be used in chemical milling of steel, aluminum, titanium, nickel, magnesium, and other metals. It resists commonly used acids, alkalies, and electrolytes to protect areas of the metal piece where removal of metal is not desired. The plastic material is first sprayed, rolled, or painted on the metal surface under safe light. Then piece is masked with a photographically prepared line negative and exposed to high-intensity illumination. After treatment with proper developer, light-exposed areas will resist the action of the etching solutions. Plates can be precoated and stored before exposure. Product is priced at $11 per quart and $200 per five gallons. Developed by **Eastman Kodak Co.**, 343 State St., Rochester 4, N. Y.

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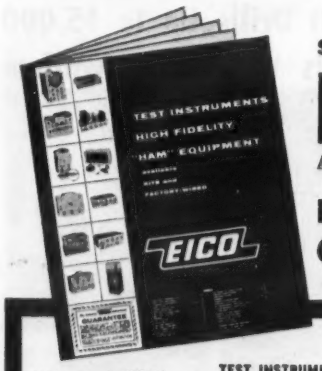

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A new air filter panel developed by Air-Maze is completely dry, yet can be washed in cold water. Extended surface design provides more than four times the effective surface of conventional panels. Made of corrosion resistant Amylon (an inert, bonded synthetic fiber mat) encased in a galvanized frame between two layers of aluminum screen. Highly efficient, unaffected by varying air velocities and temperatures. Lasts indefinitely. Available in 1" and 2" thicknesses and in all popular sizes. Write for Bulletin 376-151, The Air-Maze Corporation, Dept. NE-9, Cleveland 28, Ohio. (Subsidiary of ROCKWELL-STANDARD Corporation)

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"MNH" FLEXIBLE CONNECTORS

FROM STOCK FOR FASTEST SERVICE

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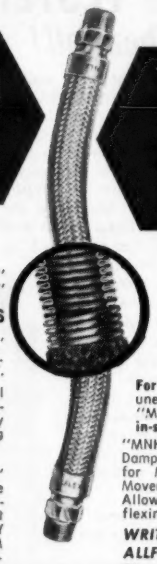
• MONEL



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1" 1¼" 1½" 2"

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36" 48" 60" 6 FT.
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. . . also available in all standard sizes, in any required length, with any standard or special fitting or flange.

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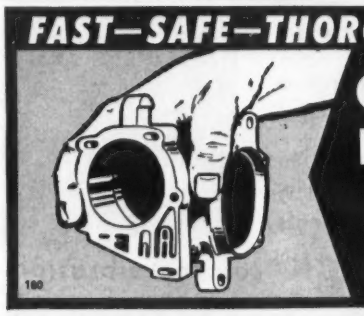

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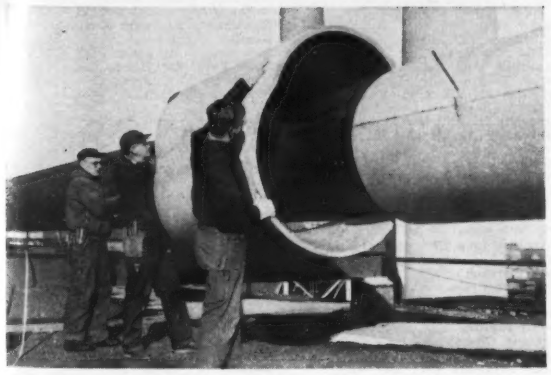
They compared "K" Factors and Cost Factors...and bought G-B Snap*On®



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Advt.

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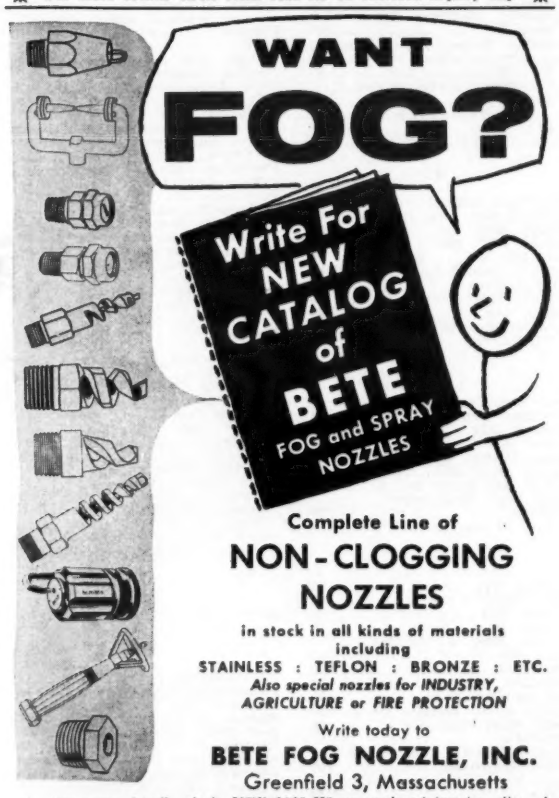

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New Processes & Materials

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liquid dries for cutting, machining

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PAINT REMOVER
strips varnishes, lacquers, alkyds

Water rinseable, brush-on type Turco 4377B paint remover remains wet and workable for a day or longer and will strip up to 10 layers of paint with one coating. It is nonflammable, noncorrosive to common metals, and effectively removes varnishes, lacquers, primers, enamels, and baked urea alkyd coatings, as well as various paints. Product thickens when standing and becomes thin when agitated. Thus, it will cling to vertical and overhanging surfaces. Paint film is removed in sheets with a high-pressure water rinse. It leaves a clean, film-free surface that is ready for immediate repainting. Formulated by **Turco Products, Inc.**, 24600 S. Main St., Wilmington, Calif.

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bonds wood, metal, plastic, glass

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THROUGH CRACKS or HOLES IN UNDERGROUND WALLS with

SEEP-SEAL

STOPS THE LEAK IN 2 MINUTES

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NEW UNIPUNCH "AJ" Series provides not only interchangeability with UNIPUNCH Series "A" . . . but also WITH UNITS and PARTS of OTHER LEADING MANUFACTURERS!

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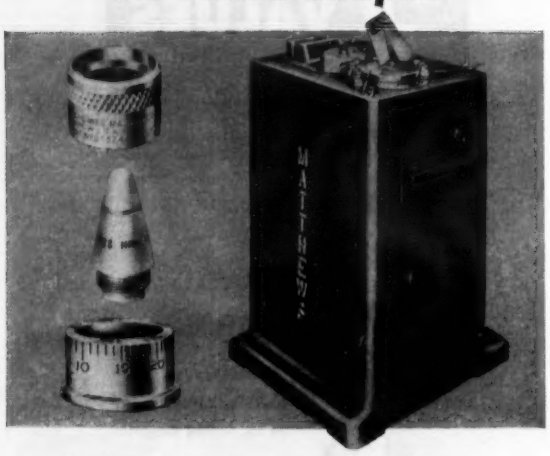

Continuous Marker for round, solid, tubular, or conical shapes. Can be equipped with Feed and Ejector for automatic operation. Write for Bulletin 146 C-9.

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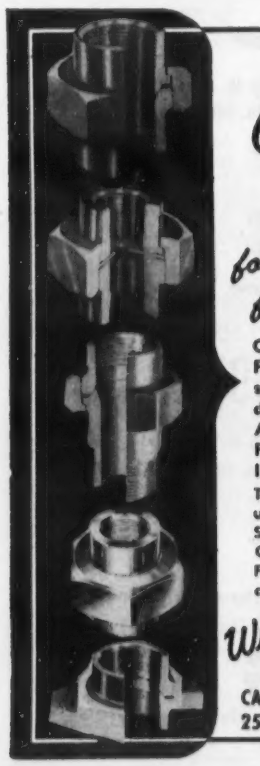

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Index to Advertisers

A

A & A Mfg. Co., Inc. 94
A'G'A Div., Elastic Stop Nut Corp. of America 30, 73
Abart Gear & Machine Co. .. 86
Abell-Howe Co. 105
Abrasive Products, Inc. 39
Accurate Mfg. Co. 37
Acme Electric Corp. 18
Acra Electric Corp. 51
Acro Metal Stamping Co. 102
Acromark Co., The 52
Adams, R. P., Co., Inc. 5
Aget Mfg. Co. 17
Air-Maze Corp. 108
Airetool Mfg. Co. 34
Airmatic Valve, Inc. 83
Akro-Mils, Inc. 4
Alan Wood Steel Co., Penco Div. 97
Alden Systems Co. 9
Alemite Div., Stewart-Warner 63
Allen, W. D., Mfg. Co. 69
Allen-Bradley Co. 87
Allied Metal Hose Co. 108
Allis, Louis, Co., The 50
Allis-Chalmers 29
Alloys Unlimited, Inc. 5
Alsto Co. 87
Aluminum Co. of America .. 36
Aluminum Ladder Co. 73
Amercoat Corp. 46
American Air Filter Co. 29
American Brass Co. 34
American Chain & Cable Co. 23
American Hoist & Derrick Co., Crosby-Laughlin Div. . 85
American Metal Hose Div., American Brass Co. 34
American Monorail Co. 12
American Monorail Co., Conveyor Div. 80
American Optical Co., Safety Products Div. 54
American Sealants Co. 32
American Solder & Flux Co. 38
Ames, B. C., Co. 89
Ampower Products Co. 3
Anaconda Copper Co. 34
Anchor Coupling Co. 18
Anderson Bros. Mfg. Co. 37
Angier Adhesives 89
Apco Mossberg Co. 88
Appleton Electric Co. 35
Arcos Corp. 43
Associated Spring Corp. 75
Atlas Press Co., Clausing Div. 70
Aurora Equipment Co. 70
Auto-Diesel Piston Ring Co. 3
Auto-Ponents, Inc. 13, 102
Automation Devices, Inc. 106

B

Babcock & Wilcox Co., Tubular Products Div. 26
Bacharach Industrial Instrument Co. 48
Barber-Colman Co. 12
Barco Mfg. Co. 36
Barnstead Still & Sterilizer Co. 14
Barry Controls, Inc. 68
Batavia Metal Products Corp. 26
Bausch & Lomb Optical Co. 44
Bean, John, Industrial Sales Dept., Div. of Food Machinery & Chemical Corp. 45
Bear Mfg. Co. 16
Bellows Co. 76
Bendix Aviation Corp. 64
Bennett Pump Div., John Wood Co. 65
Bergen Wire Rope Co. 51
Bete Fog Nozzle, Inc. 109
Bettcher Mfg. Corp., Panelbloc Div. 3
Beverly Shear Mfg. Co. 87
Biddle, James G., Co. 62
Big Joe Mfg. Co. 109
Bil-Jax, Inc. 24
Binks Mfg. Co. 95
Black-Clawson Co., The 22
Black & Decker Mfg. Co. .. 29
Blackmer Pump Co. 82
Blake, Edward, Co., Inc. 94
Bliss, E. W., Co., Die Supply Div. 10
Boiler Engineering & Supply Co. 6
Borroughs Mfg. Co. 88
Bowser, Inc. 55
Boyar-Schultz Corp. 112
Brady, W. H., Co. 24
Brainard Steel Div., Sharon Steel Corp. 71
Brandon Equipment Co., Inc. 6
Branson Ultrasonic Corp. .. 9
Breeze Corporations, Inc. 38
Breuer Electric Mfg. Co. 41
Brightboy Industrial Div., Weldon Roberts Rubber Co. 111
Brook Motor Corp. 28
Brooks Rotameter Co. 54
Brown Engineering Co. 44
Browning Mfg. Co. 2
Burgess-Manning Co. 73
Buschman, E. W., Co. 8
Bussmann Mfg. Co. 56, 57

C

C & D Batteries, Inc. 85
Cady Metal Fabricating Co. 96
Cambridge Wire Cloth Co. .. 15
Campbell Box & Tag Co. 39
Cannon Vibrator Co. 3
Carman Laboratories, Inc. .. 4
Carpenter Steel Co. 54
Carter Controls, Inc. 59
Catawissa Valve & Fittings Co. 110
Cellcote Co. 81
Celluplastic Corp. 55
Century Hydraulics Div., of Century-Detroit 99
Chain Belt Co. 47
Chainveyor Corp. 77
Chicago Eye Shield Co. 71
Chicago Mfg. & Distributing Co. 68
Chippewa Plastics Co. 69
Chisholm-Moore Hoist Div. .. 9
Circo Ultrasonic Corp. 6
Clair Mfg. Co., Inc. 42
Clarke Floor Machine Co. 84
Clausing Div., Atlas Press Co. 70
Clearing Div. of U. S. Industries, Inc. 14
Cleco, A Div. of Reed Roller Bit Co. 76
Cleveland Crane & Engineering Co. 31, 96
Cleveland Tramrail Div., Cleveland Crane & Engineering Co. 31
Cleveland Vibrator Co. 67
Cleveland Wire Cloth & Mfg. Co. 47
Cleveland Worm & Gear Co. 70
Climax Metal Products Co. .. 70
Clippard Instrument Laboratory, Inc. 104
Clipper Belt Lacer Co. 69
Clipper Mfg. Co. 83
Coffing Hoist Div., Duff-Norton Co. 17
Colonial Rubber Co. 26
Columbus McKinnon Chain Corp. 8
Commander Mfg. Co. 95
Cone Drive Gears, Div. Michigan Tool Co. 17
Controls Co. of America 57
Conveyor Specialty Co. 68
Cool-Amp Co. 70
Coppus Engineering Corp. 28
Corning Glass Works 14
Cover, H. S. 8
Crane Co. 78
Crane Packing Co. 105
Cratex Mfg. Co. 6
Cullen-Friestedt Co. 87
Cunningham, M. E., Co. 98
Cushman & Denison Mfg. Co. 98
Cutler-Hammer, Inc. 41
Cyclone Fence Dept., American Steel & Wire Div., United States Steel 89

D

D & M Products, Inc. 58
Daffin Mfg. Co. 8
Darnell Corp. Ltd. 32
Daystrom-Weston Sales Div. 10
De Laval Steam Turbine Co. 105
Delron Co., Inc. 10
Deluxe Metal Furniture Co. .. 58
Deming Co. 52
Dempster Brothers 90
Detroit Power Screwdriver Co. 75
Detroit Stamping Co. 16
Devcon Corp. 110
DeVilbiss Co. 38
Diamond Expansion Bolt Co. 79
Dick, R. & J., Co., Inc. 2
Dico Co. 34
Dillon, W. C., & Co., Inc. 29, 107
Dings Magnetic Separator Co. 51
Disogrin Industries 7
Dodge Mfg. Co. 27
Dolge, C. B., Co. 94
Dollinger Corp. 101
Douglas Fir Plywood Association 74
Dow Corning Corp. 96
Drake Manufacturing Co. 54
Dreis & Krump Mfg. Co. .. 80
Dresser Mfg. Div. 22
Driv-Lok Sales Corp. 18
Duff-Norton Co. 3, 17
Dundick Tool Works, Inc. .. 12
Durant Mfg. Co. 73

E

Eastern Industries, Inc. 59
Eastern Machine Screw Corp. 20
Eastman Kodak Co. 41
Eaton Mfg. Co., Reliance Div. 60
Edmont Mfg. Co. 59
Edmund Scientific Corp. ..2, 112
Eisler Engineering Co. 87
Elastic Stop Nut Corp. of America 30, 73
Electri-Flex Co. 74
Electric Controller & Mfg. Co., Div. of Square D Co. 31
Electro Switch Corp. 10
Electronic Instrument Co., Inc. 108
Elk Engineering Works, Inc. 62
Elliott Co. 80
Emerson Electric Mfg. Co. .. 46
Engler Instrument Co. 8
Enterprise Machine Parts Corp. 61
Equipment Mfg., Inc. 52
Equipto Div., Aurora Equipment Co. 70
Erie Mfg. Co. 19, 88
Exact Weight Scale Co. 86

F

Fairbanks Co., The 67
Fairfield Mfg. Co. 24
Falcon Alarm Co. 15
Farquhar, A. B., Div., Oliver Corp. 71
Farrelloy Co. 112
Fastex Div. of Illinois Tool Works 52
Fawick Airflex Div., Fawick Corp. 90
Federal-Mogul Div., Federal-Mogul-Bower Bearings, Inc. 18
Federal Pacific Electric Co. 100
Federal Press Co. 49
Federal Products Corp. 75
Federal Tool & Mfg. Co. 63
Felt Products Mfg. Co. 72
Fenwal, Inc. 41
Ferguson, J. L., Co. 78
Ferry Cap & Set Screw Co. 86
Fisher Governor Co. 40
Fisher-Pierce Co., Inc. 102
Flexible Steel Lacing Co. 11
Flexo Products, Inc. 64
Flexrock Co. 111, 112
Flintkote Co. 5, 35
Food Machinery & Chemical Corp. 45
Foote Bros. Gear & Machine Corp. 102
Forge & Fittings Div., H. K. Porter Company, Inc. 106
Formsprag Co. 51
Foster Supplies Co. 8
Fostoria Corp. 53
Foxboro Co., The 5
Frantz, S. G., Co. 36
Frazier & Son 83
Frederick Iron & Steel, Inc. .. 67
Freeway Washer & Stamping Co. 84
Fuller Co. 72
Fulton Sylphon Div., Robertshaw-Fulton Controls Co. . 78
Funk Mfg. Co. 82

G

Gardner-Denver Co. 39
Garlock Packing Co. 96
Gast Mfg. Corp. 90
Gear-O-Mation Div. of Michigan Tool Co. 46
Gemco Electric Co. 10
General Controls 79
General Electric Co. 53
General Filters, Inc. 6
General Radio Co. 67
General Scientific Equipment Co. 7
Gits Bros. Mfg. Co. 38
Gonset Div. of Young Spring & Wire Corp. 56
Goodrich, B. F., Tire Co., A Div. of The B. F. Goodrich Co. 15
Goodyear Tire & Rubber Co. 19, 33
Gould, J. D., Co. 58
Graham Transmissions, Inc. .. 16
Granet Corp., The 61
Graphic Systems 34
Gray Co., Inc. 16
Graymills Corp. 108
Green Instrument Co., Inc. .. 97
Greene, Tweed & Co. 68
Greenlee Bros. & Co. 89
Grey Hub Trolley Wheel Co. 108
Gries Reproducer Corp. 101
Grieve-Hendry Co. 94
Gustin-Bacon Mfg. Co. 109

H

Hagen Mfg. Co. 60
Hallemite Mfg. Co. 62
Haloid Xerox Inc. 20
Hamilton Tool Co., The 15
Hanna Engineering Works .. 105
Hannifin Co., A Div. of Parker-Hannifin Corp. 80
Hanscom, H. F., & Co., Inc. 91
Hansen, A. L., Mfg. Co. 12
Hansen Mfg. Co. 15
Harrington Co. 24
Harrington & King Perforating Co., Inc. 65
Hartford Steel Ball Co. 50
Hassall, John, Inc. 66
Heli-Coil Corp. 14
Helicoid Gages Div., American Chain & Cable Co., Inc. .. 23
Hellermann Corp. 8
Heppenstall Co. 82
Hetherington & Berner, Inc. 72
Hevi Duty Electric Co. 98
Hewitt-Robins 60
Highside Chemicals, Inc. 19
Hild Floor Machine Co. 11
Hi-Lo Products Co., Div. of Steel City Testing Machines, Inc. 74
Hobbs Mfg. Co. 55
Hoffman Bros. Drilling Co. 107
Homestead Valve Mfg. Co. .. 103
Houghton, E. F., & Co. 98
Humphrey Products Div. of General Gas Light Co. .. 86
Hunt Valve Co. 2
Hunter Spring Co. 62
Hydraulic Mfg. Co. 7
Hydraulic Press Mfg. Co. .. 72
Hydroway Scales, Inc. 66

I

Ideal Industries, Inc. 3
Illinois Testing Laboratories, Inc. 34
Industrial Engineering Corp. 40
Industrial Engineering Equipment Co. 94
Industrial Handling Equipment Co. 100
Injection Molders Supply Co. 43
International Molded Plastics, Inc., Structoglas Div. 66
International Staple & Machine Co. 20
Invincible Vacuum Cleaner Mfg. Co. 80
Ironbound Box & Lumber Co. 25

J

Jack Pack Mfg. Co. 38
Jacobson Nut Mfg. Co. Corp. 106
Jeffrey Mfg. Co. 39
Jetrow Co., The 24
Jiffy Mfg. Co. 26
Johnson Bronze Co. 81
Johnson Corp. 30
Johnson Mfg. Corp. 45
Jomac, Inc. 99
Jones, Howard B., Div., Cinch Mfg. Corp. 81

K

Kant-Slam Door Check Co. .. 4
Katolight Corp. 14
Kerotest Mfg. Co. 75
Kester Solder Co. 108
Kidde, Walter, & Co., Inc. .. 57
Kinney Mfg. Div., The New York Air Brake Co. 40
Kling Bros. Engineering Works 78
Klipfel Valves, Inc. 26

L

LaDeau Mfg. Co. 62
Lake Chemical Co. 92
Lapeer Mfg. Co. 64
Leiman Bros., Inc. 65
Lennox Tool & Machine Builders 92
Lewis, G. B., Co. 78
Link-Belt Co. 21
Lipe-Rollway Corp. 79
Littell, F. J., Machine Co. .. 25
Locke Steel Chain Co. 66
Logan Co. 4
Lovejoy Flexible Coupling Co. 47
Lowell Industries, Inc. 107
Luma Electric Equipment Co., The 34
Lyon Metal Products, Inc. .. 27

M

M B Electronics, A Div. of Textron Electronics, Inc. .. 79
Machine Products Corp. 49
Mac-It Parts Co. 84
Mackintosh-Hemphill Div., E. W. Bliss Co. 99
Magline Inc. 31, 112
Magna-Lock, Inc. 63
Manheim Mfg. & Belting Co. 32
Markal Co., The 14, 97
Marman Div., Aeroquip Corp. 62
Martin Engineering Co. 28
Mason-Neilan Div. of Worthington Corp. 22
Master Appliance Corp. 101
Mathews Conveyor Co. 67
Matthews, Jas. H., & Co. .. 110
Maxwell Industries, Inc. 91
Mayline Co., Inc. 45
McGill Mfg. Co. 30, 79
McKinstry Metal Works, Inc. 42
Mead Specialties Co. 103
Mercoid Corp. 64
Merrill Brothers 55
Methods Research Corp. 13
Metzgar Conveyor Co. 44
Micro-Switch, A Div. of Minneapolis-Honeywell Regulator Co. 53
Milbar Corp. 7
Miller Electric Mfg. Co., Inc. 93
Miller Sewer Rod Co. 112
Millers Falls Co. 68
Milwaukee Dustless Brush Co. 81
Minneapolis-Honeywell 11
Minnesota Mining & Mfg. Co. 101
Minnesota Rubber Co. 88
Mixing Equipment Co. 42
Modern Machine Tool Co. 46
Modernair Corp. 56
Momar Industries 5
Monarch Rubber Co. 25
Monsanto Chemical Co. 87
Morse Mfg. Co., Inc. 95
Mortell Co. 53
Mosinee Paper Mills Co. 13
Moto-Truc Co. 96
Mueller Brass Co. 54
Multi-Clean Products, Inc. .. 96
Murray, D. J., Mfg. Co. .. 66
Mystik Adhesive Products, Inc. 93

N

NRC Equipment Corp. 16
National Acme Co. 45
National Machine Products .. 65
National Perforating Corp. .. 98
National Super Service Co., The 102
National Ultrasonic Corp. .. 5
Nestier Corp. 40
New Jersey Machine Corp. .. 106
New York Air Brake Co., Kinney Mfg. Div. 40
Niagara Machine & Tool Works 61
Nissen, Jr., John P., Co. 26
Norgren, C. A., Co. 81
Nu-Matic Grinders, Inc. 58
Nye Tool Co. 9

O

Ohio Nut & Bolt Co. 33
Ohio Rod Products Co., Inc. 79
Ohio Rubber Co., The 94
Oil-Rite Corp. 58
Oliver Corp., A. B. Farquhar Div. 71
Olson Filtration Engineers Div. of American Laundry Machinery Co. 68
Onan, D. W., & Sons, Inc. 40
O'Neil-Irwin Mfg. Co. 51
Osborn Mfg. Co., The 106
Owatonna Tool Co. 50

P

Palley Supply Co. 107
Palmer-Shile Co. 31
Paltier Corp., The 75
Pangborn Corp. 38
Pannier Corp. 33
Paragon Spring Co. 16
Parker-Hannifin Corp. 37, 80, 95
Parker Fittings & Hose Div. of Parker-Hannifin Corp. . 37
Parker-Kalon Div., General American Transportation Corp. 89
Parker Seal Co., Div. of Parker-Hannifin Corp. 95
Parker Sweeper Co. 108
Partlow Corp., The 32
Paslode Co., Div. of Signode Steel Strapping Co. 55
Pass & Seymour, Inc. 48
Patterson Foundry & Machine Co. 105
Pedrick Tool & Machine Co. 67
Peerless Electric Co., The .. 42
Penco Div., Alan Wood Steel Co. 97
Peninsular Steel Co. 61
Pennsalt Chemicals Corp. .. 77
Pereny Equipment Co. 54
Perfecting Service Co. 17
Perfection Gear Co., American Stock Gear Div. 81
Permacel 25
Pfaudler-Permutit, Inc., Pfaudler Div. 18
Phillips Process Co., Inc. .. 17
Pines Engineering Co. 27, 86
Pioneer-Central Div., Bendix Aviation Corp. 64
Pioneer Rubber Co. 102
Pittsburgh Lectrodryer Div., McGraw-Edison Co. 63
Platecoil Div., Tranter Mfg. Inc. 82
Polymer Corp. of Penna. .. 100
Porter, H. K., Company, Inc., Forge & Fittings Div. 106
Power-Curve Conveyor Co. .. 48
Precision Tool & Mfg. Co. .. 49
Pressed Steel Tank Co. 54
Production Machinery, Inc. .. 59
Professional Tape Co., Inc. . 36
Protective Closures Co. 74
Pryor Marking Products 107
Pullgear Co., The 3
Pulmosan Safety Equipment Corp. 98
Punch Products Corp. 109
Purolator Products, Inc. ..25, 104

Q

Quickdraft Corp. 37

R

Rapids-Standard Co., Inc. .. 43
Rapistan-Keystone, Inc. 43
Raymond Corp., The 90
Redmer Air Devices, Inc. .. 98
Reid Metal Products, Inc. .. 69
Renfroe, J. C., & Sons, Inc. 65
Republic Steel Co. 50
Research-Cottrell, Inc. 45
Research Products Corp. 85
Resistoflex Corp. 91
Reuland Electric Co. 77
Reynolds Metals Co. 28
Reznor Mfg. Co. 32
Richards-Wilcox Mfg. Co. ... 107
Ridge Tool Co. 86
Robbins & Myers, Inc., Hoist & Crane Div. 75
Robbins & Myers, Inc., Pump Div. 30
Roberts Electric Co. 10
Roberts, Weldon, Rubber Co., Brightboy Industrial Div.. 111
Robertshaw-Fulton Controls Co. 78
Rochester Mfg. Co. 85
Rock-Tred Corp. 109
Rockwell Mfg. Co. 60
Rockwell-Standard Corp., Grating Div. 48
Rockwood Sprinkler Co. 33
Ross Operating Valve Co. 70
Rotary Lift Co. 27, 84
Round, David, & Son, Inc... 52
Roura Iron Works, Inc. 77
Royal Metal Mfg. Co. 73

S

SKF Industries, Inc. 56, 57
Salem-Brosius, Inc. 76
Sarco Co., Inc. 63
Sargent & Co. 16
Scherr, George, Co., Inc. 97
Schmidt, Geo. T., Inc. 48
Schrader's, A., Son, Div. of Scovill Mfg. Co. 30, 95
Schroeder Brothers Corp. 2
Schutte & Koerting Co. 19
Screen Equipment Co., Inc... 100
Service Recorder Co. 82
Setlow, M., & Son, Inc. 77
Sewall, E. B., Mfg. Co. 48
Sexauer, J. A., Mfg. Co. 103
Shakeproof Div., Illinois Tool Works 104
Sheffield Corp., The 46
Sico Mfg. Co., Inc. 47
Sigmamotor, Inc. 33
Signode Steel Strapping Co. 31, 55, 84
Simmons Fastener Corp. 71
Simplatrol Products Corp. 49
Simplicity Engineering Co. 55
Sintz, Claud, Inc. 43
Skil Corp. 39, 76
Skinner, M. B., Co. 50
Skinner Chuck Co., The.... 82
Skinner Electric Valve Div... 35
Smith Welding Equipment Corp. 5
Smooth-On Mfg. Co. 69
Snap-On Tools Corp. 47

Advertisers Index—Continued

Sonneborn, L., Sons, Inc. ... 35, 37
Southwest Products Co. ... 28
Spee-Flo Co. ... 104
Spencer Turbine Co. ... 93
Sperry Products, Inc. ... 99
Spray Engineering Co. ... 63
Spraying Systems Co. ... 99
Sprayon Products, Inc. ... 78
Square D Co., Electric Controller & Mfg. Co. Div. ... 31
Square D Company ... 31
Stackbin Corp. ... 29
Stackpole Carbon Co. ... 71
Standard Conveyor Co. ... 61
Standard Industrial Products Co. ... 73
Standard Pressed Steel Co. ... 22, 35, 59, 88
Stanford Engineering Co. ... 88
Stanley Works ... 30, 75
Sta-Warm Electric Co. ... 13
Stearns Electric Corp. ... 112
Stearns Magnetic Products, A Div. of Indiana Steel Products Co. ... 111
Steinen, Wm., Mfg. Co. ... 52
Stevens-Burt Co. Div. of The Water Master Co. ... 53
Stewart Warner Corp., Alemite Div. ... 63
Stokvis Multiton Corp. ... 100
Stoody Co. ... 43
Storage Products Corp. ... 6
Structoglas Div. of International Molded Plastics, Inc. ... 66
Sturtevant, P. A., Co. ... 11
Superior Carbon Products, Inc. ... 104
Superior Tube Co. ... 76
Synthane Corp. ... 42

T

Taylor Instrument Companies ... 57
Techline Div. of Wheelabrator Corp. ... 7
Teeter, C. B. ... 49
Tennant, G. H., Co. ... 57
Thermex, N. J., Co., Inc. ... 92
Thomas & Betts Co. ... 50
Thompson, Henry G., & Son Co., The ... 24
Thomson Industries, Inc. ... 64
Tinnerman Products, Inc. ... 49
Titeflex, Inc. ... 32
Tokheim Corp. ... 69
Toledo Pipe Threading Machine Co. ... 95
Tompkins-Johnson Co. ... 92
Torit Mfg. Co. ... 12
Townsend Co. ... 72
Trailevator Co., Div. of Magline, Inc. ... 22
Tranter Mfg., Inc., Platecoil Div. ... 82
Trent, Inc. ... 36
Trerice, H. O., Co. ... 99
Trippe Mfg. Co. ... 60
Trombetta Solenoid Corp. ... 7
Tropical Paint Co. ... 11
Twentieth Century Mfg. Co. ... 10

U

Uhrden, Inc. ... 41
Union Metal Mfg. Co. ... 56, 57
Union Special Machinery Co. ... 74
Union Steel Products Co. ... 22
Unisorb Div. of The Felters Co. ... 9
United Electric Controls Co. ... 18
United Metal Cabinet Corp. ... 84
U. S. Flexible Tubing Co. ... 42
U. S. Graphite Co. ... 83
U. S. Hoffman Machinery Corp. ... 104
U. S. Safety Service Co. ... 93
U. S. Steel Corp. ... 89, 91
U. S. Steel Supply Div. of U. S. Steel ... 91
U. S. Stoneware Co. ... 44

V

Vaco Products Co. ... 74
Valvair Div. of International Basic Economy Corp. ... 101
Varflex Corp. ... 56
Veeder-Root, Inc. ... 90
Vernon Tool Co., Ltd. ... 4
Versa Products Co., Inc. ... 60
Viking Pump Co. ... 61
Vogel-Peterson Co. ... 20

W

WLS Stamping Co. ... 72
Waco Mfg. Co. ... 101
Wager, Robert H., Co. ... 44
Wagner Electric Corp. ... 65
Walker-Turner Div. of Rockwell Mfg. Co. ... 60
Wallace Supplies Mfg. Co. ... 91
Warner Electric Brake & Clutch Co. ... 12
Wassell Organization, Inc. ... 44
Wayne Mfg. Co. ... 66
Wayne Pump Co. ... 46
Weber Marking Systems Div. of Weber Addressing Machine Co. ... 56
Webster Electric ... 103
Webster Instruments, Inc. ... 91
Wedge Wire Corp. ... 103
Weller Electric Corp. ... 59
Western Tool & Mfg. Co., Inc. ... 36
Wiegand, Edwin L., Co. ... 4
Wilcox-Crittenden Div., North & Judd Mfg. Co. ... 6
Wilkins Co., Inc. ... 58
Wilton Tool Mfg. Co. ... 107
Winsmith, Inc. ... 93
Wintriss, Inc. ... 20
Wire & Iron Products, Inc. ... 12
Witt Cornice Co., The ... 85
Woehr, F. A., Machine Co. ... 92
Wolverine Tube Div., Calumet & Hecla, Inc. ... 13, 97
Wood, John, Co., Bennett Pump Div. ... 65
Wood Shovel & Tool Co. ... 28
Wooster Products, Inc. ... 25
Worcester Valve Co., Inc. ... 20
Wright Hoist Div., American Chain & Cable Co. ... 23

X

X-Acto, Inc. ... 53

Y

Yale & Towne Mfg. Co. ... 19

Z

Zagar, Inc. ... 2

Index to Products

A

Abrasive Products ... 6, 36, 39, 52, 73, 111
Actuators ... 7, 59
Adhesives ... 19, 69, 89, 91, 95, 103, 107, 109
Air Conditioning Equipment ... 79
Alarms ... 1, 38, 57
Alloys ... 54, 97
Aluminum ... 36, 112

B

Balancing Equipment ... 16, 37
Balers ... 4, 15
Balls ... 50
Baskets ... 12
Battery Chargers ... 39, 85
Bearings ... 28, 45, 47, 50, 54, 56, 57, 64, 70, 79, 81, 84, 90, 106
Belt, Conveyor ... 60
Belting ... 2, 31, 32
Benders ... 27, 62, 67, 86, 92
Bins & Boxes ... 4, 9, 14, 24, 27, 29, 37, 40, 56, 57, 78
Bird Control ... 60
Boilers ... 6
Bolts ... 100
Boots ... 94
Brakes ... 12, 34, 49, 61, 104
Broaching Equipment ... 52
Bronze ... 81
Brushes ... 81, 106
Brushes, Electric ... 83, 104
Building Materials ... 21, 66
Bushings ... 18

C

Cabinets ... 4, 11
Cabinets, Key ... 17
Cams & Followers ... 87
Casters ... 10, 17, 32, 92
Castings ... 92
Cements, Repair ... 62, 69, 81, 105, 108, 109, 110
Ceramics ... 14
Chains & Fittings ... 6, 8, 47, 90
Chairs & Stools ... 27, 47, 73
Chucks ... 82, 98
Clamping Devices ... 16, 33, 38, 62, 64, 74, 104, 107
Clamps, Lifting ... 55, 65, 69, 82, 87
Cleaners, Air ... 5, 11
Cleaners, Drain ... 7, 53, 85, 112
Cleaners, Vacuum ... 11, 41, 78, 80, 84, 93, 102
Cleaning Equipment, Blast ... 1, 14, 38, 45, 58, 77
Cleaning Machines ... 16, 46, 55, 64, 108
Cleaning Materials ... 54, 58, 89, 99
Clutches ... 12, 49, 51, 112
Coatings, Protective ... 38, 53, 87, 91, 95, 97, 105, 107
Collars ... 59
Communications Equipment ... 15, 56, 80
Compressors ... 12, 39, 45, 46, 77
Computers ... 34
Condensation Preventive ... 53
Controls, Air & Hydraulic ... 1, 2, 5, 13, 19, 30, 36, 49, 60, 70, 71, 79, 83, 86, 95, 101, 102, 104
Controls, Edge Position ... 88
Controls, Electric ... 1, 6, 10, 26, 31, 41, 44, 45, 48, 53, 57, 60, 62, 71, 74, 84, 85, 98
Controls, Level ... 21
Controls, Positioning ... 69
Controls, Pressure & Temperature ... 8, 12, 18, 22, 26, 32, 33, 34, 40, 41, 42, 55, 56, 57, 60, 63, 64, 78, 84, 87
Controls, Production ... 2, 8, 13, 34, 44, 82
Controls, Remote ... 56, 62, 68, 99
Conveyor Accessories ... 18, 21, 23, 27, 60, 66, 92, 108
Conveyors ... 2, 4, 8, 22, 43, 46, 47, 48, 63, 67, 68, 71, 72, 77, 80, 82, 94, 106, 107
Coolant Systems ... 81
Counting Devices ... 32, 68, 73, 87, 90
Couplings, Flexible ... 21, 47
Crane Accessories ... 24, 105
Cranes ... 23, 31, 40, 41
Crushers ... 31
Cutters ... 51, 55
Cutting Equipment, Gas ... 13, 18
Cutoff Machines ... 22, 46, 59, 84, 91
Cylinders, Air & Hydraulic ... 56, 80, 103, 105, 107

D

Deburring Equipment ... 16, 75
Demagnetizers ... 34
Dials ... 30
Dies & Accessories ... 80, 96, 109
Dockboards & Ramps ... 31, 38, 84, 112
Door Operators ... 4, 70
Doors, Industrial ... 56
Drafting Equipment ... 5, 12, 45, 58, 87
Drill Heads, Adjustable ... 2, 95
Drilling Machines ... 49
Drills & Accessories ... 68, 107
Drives, Machine ... 2, 47, 62, 82
Drives, Variable Speed ... 3, 10, 16, 48, 75, 90, 98
Drying Equipment ... 63
Dust Collectors ... 12, 17, 45

E

Electric Plants ... 14, 67
Electronic Equipment ... 1, 36, 42, 104
Elevating Equipment ... 21, 22, 24, 27, 39, 47, 82, 83
Engines, Industrial ... 40
Engraving Machines ... 97
Exhausters ... 37
Expanders, Tube ... 80
Extrusions ... 54

F

Fans & Blowers ... 46, 59
Fasteners ... 7, 8, 10, 14, 18, 22, 30, 35, 37, 43, 46, 49, 60, 65, 66, 72, 73, 79, 84, 86, 88, 89, 91, 92, 96, 100, 104, 106
Fasteners, Belt ... 11, 69
Faucet Repairs ... 103
Feeders ... 19, 25, 62, 72, 76, 79, 88, 106
Felt Products ... 103
Filtering Equipment ... 6, 11, 25, 27, 29, 33, 68, 85, 101, 104, 108
Finishes ... 78, 87, 97, 98
Finishing Equipment ... 1, 16, 19, 28, 38, 42, 58, 60, 70, 75, 82, 96, 104
Fire Extinguishing Equipment ... 33
Floor Machines ... 51, 57, 84, 96, 108
Floor Materials ... 5, 35, 37, 41, 48, 93, 101, 112
Forgings ... 54, 106
Framing ... 50, 102
Furnaces, Industrial ... 36, 54, 86, 98
Fuses ... 56, 57

G

Gages, Level ... 8, 99
Gages, Precision ... 2, 6, 8, 12, 46, 75, 89, 92, 97
Gages, Pressure & Temperature ... 23, 29, 40, 70, 85
Gearing ... 24, 48, 52, 70, 100, 102
Glazing Materials ... 66
Gloves, Industrial ... 51, 59, 61, 99, 102
Grating ... 48
Grinding Equipment ... 19, 32, 58, 59, 75, 94, 112

H

Hardware ... 3, 4, 6, 15, 33, 71
Heat Exchangers ... 5, 13, 66, 82
Heaters, Electric ... 1, 4, 51, 53, 92, 101
Heaters, Electronic & Induction ... 7, 49
Heaters, Unit ... 3, 32, 54, 66, 86
Hoists ... 5, 9, 17, 23, 75, 107
Hose & Fittings ... 15, 17, 18, 32, 33, 34, 37, 38, 42, 57, 62, 69, 74, 78, 108

I

Incinerators ... 87
Inspection Equipment ... 2, 8, 44, 49, 68, 112
Instruments, Electric ... 12, 33, 51, 100
Insulation, Electric 6, 13, 37, 56
Insulation, Thermal ... 101

J

Jacks ... 3, 38, 102
Jacks, Leveling ... 61
Jigs & Fixtures ... 96
Joints, Rotating ... 30, 36
Joints, Universal ... 81

L

Labels ... 24, 43, 62
Laboratory Equipment ... 27
Ladders ... 28, 73
Lawnmowers ... 66
Levers ... 26
Lighting Equipment ... 7, 30, 44, 67, 96
Lights, Pilot ... 54
Lockers & Shelving ... 27, 40, 58, 70, 88, 97
Lubricating Equipment & Materials ... 38, 58, 63, 81, 96

M

Machine Tool Accessories ... 20, 28, 36, 48, 49, 59, 65, 73, 76, 79
Machine Tools ... 14, 26, 50, 58, 70, 78, 89, 102, 104, 112
Magnetic Equipment ... 2, 7, 9, 19, 36, 51, 63, 111
Magnifiers ... 2, 44, 112
Marking Equipment ... 1, 3, 14, 17, 24, 31, 33, 34, 48, 52, 56, 75, 76, 78, 87, 91, 93, 98, 107, 110
Materials Handling Equipment ... 4, 12, 22, 24, 25, 29, 37, 40, 44, 46, 49, 55, 56, 57, 61, 62, 64, 65, 68, 75, 76, 77, 78, 84, 87, 90, 96, 100, 102, 104, 106
Materials Handling, Overhead ... 12, 31, 43, 100
Materials, Perforated ... 65, 98
Meters, Flow ... 19, 54, 72, 96
Mills ... 105
Mixing Equipment ... 8, 42, 47, 51, 59, 76, 95
Mold Release ... 43, 95
Molybdenum ... 103
Motors, Air & Hydraulic ... 90, 106
Motors, Electric ... 28, 39, 42, 50, 60, 64, 72, 77, 81, 94, 106

N

Nameplates ... 24
Nozzles, Spray ... 43, 52, 63, 95, 99, 109
Nuts ... 35, 49, 65, 92, 100, 106

O

Office Equipment ... 53
Openers, Drum ... 55, 68
Ovens, Industrial ... 1, 94

P

Packaging Equipment & Materials ... 13, 21, 24, 26, 32, 39, 55, 60, 65, 69, 74, 78
Packings & Gaskets ... 3, 18, 68, 89, 96, 111
Paper Products ... 13
Partitions ... 21
Parts, Deep Drawn ... 36, 54
Parts, Precision ... 54, 101
Photoelectric Equipment ... 57, 58, 76, 102, 104
Pins ... 12, 18, 73, 88
Pipe & Fittings ... 14, 18, 22, 46, 50, 64, 91, 104, 110
Pipe & Thread Compounds ... 19, 25, 72, 78, 92
Pipe Tools & Machines ... 2, 9, 35, 86, 95
Plastic Panels, Reinforced ... 66
Plastics ... 42, 55, 70, 92, 101, 106, 108
Plating Equipment ... 70, 90
Plugs & Caps ... 74
Plywood ... 74
Power Units, Hydraulic ... 34, 50
Presses ... 22, 37, 49, 56, 69, 72, 80, 88, 92
Process Equipment ... 8, 72
Production Facilities ... 94
Pullers ... 17, 23, 94
Pulleys & Sheaves ... 2, 3, 31
Pumps ... 16, 27, 30, 33, 52, 53, 55, 61, 65, 67, 69, 74, 100, 103
Pumps, Air & Vacuum ... 16, 28, 65, 100, 106
Pumps, Chemical ... 41
Punches ... 109
Pyrometers ... 34

R

Racks ... 6, 31, 44, 50, 52, 75, 88, 102, 104
Reactance Charts ... 67
Recorders ... 82
Refrigeration Equipment ... 72
Relays ... 10, 30, 31, 63, 77, 80
Reproduction Equipment & Materials ... 20, 41, 101
Resistors ... 18, 35
Respirators ... 8, 64, 98
Rings, Piston ... 3
Riveting Equipment ... 66, 92, 106
Rod, Threaded ... 43, 98
Roofing Materials ... 11, 97, 107
Rubber Products ... 26, 48, 88, 96
Rust Preventives ... 98, 108

S

Safety Equipment ... 1, 5, 7, 15, 20, 24, 25, 35, 47, 48, 54, 57, 58, 64, 71, 73, 77, 87, 93, 94
Saws, Masonry ... 83
Saws, Metal & Wood ... 11, 24, 30, 39, 45, 59, 60, 84, 91
Scaffolding ... 24, 83, 101
Scales ... 86, 96
Screening Equipment ... 100
Screens ... 103
Screwdriver ... 83
Screwdrivers, Power ... 75
Screws ... 22, 33, 37, 84, 86, 89, 92, 100
Seals & Sealants ... 19, 25, 32, 51, 63, 72, 78, 92, 94, 95, 102, 105, 108
Shears ... 53, 61, 62, 87, 92, 96
Shop Equipment 27, 64, 70, 85, 92
Signals ... 11, 38, 67, 83
Silicones ... 48, 95
Sleeves ... 94
Slings & Fittings ... 6, 8, 15
Slitters & Rewinders ... 55, 76
Soldering Equipment & Materials 5, 57, 59, 66, 89, 108, 112
Spacers ... 18
Speed Reducers ... 17, 21, 71, 82, 86, 93, 102, 105
Spray Equipment ... 52, 63, 95, 99, 109
Springs ... 16, 75, 98
Stampings ... 16, 63, 72
Stapling Equipment 12, 20, 46, 55
Steel ... 54, 61, 96, 98
Straighteners ... 92, 99
Strapping, Steel 13, 31, 71, 91, 102
Strippers ... 108, 109
Sweepers, Power ... 66

T

Tables ... 47
Tables, Indexing ... 87, 94
Tachometers ... 8
Tackers ... 12, 20, 55
Tanks ... 10, 54, 55
Tanks, Compound Melting ... 13
Tape, Industrial 4, 36, 37, 89, 93
Tapping Attachments & Equipment ... 15, 49, 88
Telephone Booths, Acoustic ... 73
Television, Industrial ... 70
Testing Equipment ... 2, 9, 11, 15, 25, 29, 40, 42, 48, 62, 66, 68, 91, 100, 104, 107
Thermometers ... 5, 10, 35, 99
Thermostats ... 41
Thread Repair Kit ... 14
Ties ... 91
Timing Devices 20, 31, 44, 55, 76
Tires, Industrial 7, 15, 25, 33, 94
Tools, Cutting ... 10, 20, 40, 41, 43, 52, 67, 90, 91
Tools, Hand 7, 16, 28, 38, 53, 74
Tools, Pneumatic ... 34, 76
Tools, Portable Electric 29, 53, 76
Torches ... 54, 101
Tractors, Industrial ... 12
Trailers, Industrial ... 22
Transformers ... 18, 65, 88
Traps, Air & Steam ... 20
Treads, Stair ... 25
Trolleys ... 21, 23, 105, 108
Trucks, Hand ... 22, 24, 25, 31, 55, 68, 78, 85, 100
Trucks, Industrial Power 13, 19, 29, 50, 81, 90, 94, 96, 102, 109
Tubing & Fittings 13, 24, 26, 44, 54, 55, 76, 97, 99, 100, 105, 112

U

Ultrasonic Equipment ... 1, 5, 6, 9, 64, 76, 81, 88

V

Valves ... 12, 14, 20, 23, 28, 58, 75, 79, 86, 90, 103, 104
Ventilating Equipment ... 72
Vibration Absorbers ... 9, 21, 59, 61, 68, 79, 109
Vibrators ... 3, 23, 24, 28, 47, 67
Vises ... 10, 42, 63, 73, 107

W

Wardrobe Equipment ... 20
Washers ... 60, 70, 104
Washroom Equipment ... 47, 61
Water Treatment ... 14
Waterproofing ... 109
Way-Protectors ... 94
Welding Equipment ... 3, 5, 9, 23, 43, 71, 93, 104
Wheels, Industrial ... 7, 32, 34, 43, 67, 92, 94
Winches ... 52
Winding Equipment ... 55
Wire ... 82, 108
Wire Cloth & Screen ... 47, 89, 97
Wire Rope & Fittings 6, 51, 85, 92
Wiring Devices ... 3, 8, 16, 17, 25, 29, 30, 31, 35, 37, 39, 42, 45, 50, 57, 64, 69, 77, 80, 81, 83, 99
Workbenches & Tops ... 5
Wrenches ... 43, 47, 53, 71, 76

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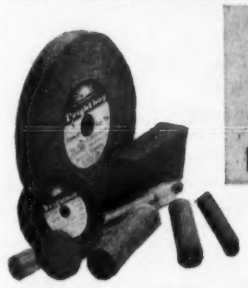

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- Wide Range of Size . . . from 7/8 in. to 4¼ in. Torque from 25 oz in. to 240 lb in.
- Heavy-Duty Construction
- Moisture-, Corrosion-Resistant
- Fast, Easy Installation
- Stationary Magnet
- Rapid Actuation
- Self-Adjusting
- Available with extended hubs for pulley mounting

For complete data, request Bulletin No. 504-BD

Stearns ELECTRIC CORPORATION
120 NORTH BROADWAY
MILWAUKEE 2, WISCONSIN

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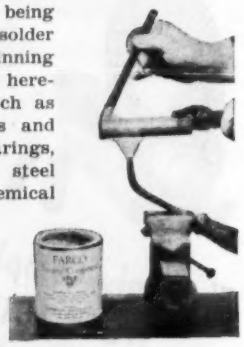
TINS ALL METALS



Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packed in 1½ lb. cans, price $3.00 f.o.b.

Have you tried #1 Acid Brushes, 25% more hair $3.50 per gross, f.o.b. Philadelphia. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

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NEW! WATER IMPACT SAVES PLUMBING BILLS

Cleans Instantly Difficult Stoppages Sewers ½" to 6" Diam.

SIMPLE TO OPERATE, THIS NEW GUN DELIVERS AN IMPACT WHICH INSTANTLY DISLODGES OBSTRUCTIONS. NO NEED TO REMOVE PIPE, GREASE TRAP, OR CROSS PIECE.

CHICAGO, Sept. 7—Just introduced is a Free Booklet on a New Discovery which enables the Janitor, Maintenance Man, or Home Owner to clean any clogged Sewer Drain.

Yet anyone can operate this new **Plumbers Flushing Gun** which releases air pressure on a solid shaft of water cleaning the most stubborn stoppages up to 200 feet. TOILETS, SINKS, URINALS, BATHTUBS, FLOOR DRAINS, and HOUSE - TO - STREET SEWERS clogged with Grease, Rags, Sand, Roots and paper melt away instantly when struck by the Hammer-like blow of this new unit.

There is no need to remove wall or pipe, or Grease Trap. A special attachment allows water to flow from the faucet through the Gun while air is released on the pipe. Vents or stacks are no obstacle, as force tends to strike wherever the water lays. But now, what is this Plumbers Flushing Gun worth in **COSTLY PLUMBING BILLS SAVED?** Tear this Ad out now—and write your name and address beside it for **FREE BOOKLET.** Obey that urge. No Agent will call. A postcard will do (Chicago Phone KIldare 5-1702).

MILLER SEWER ROD COMPANY, DEPT. NE-9
4642 North Central Ave., Chicago 30, Illinois

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New Processes & Materials

INFLATABLE METAL TUBING shipped economically in ribbon form and inflated at point of use

Major reduction in shipping costs is principal advantage afforded by Strubing (strip tubing) which can be shipped in flat ribbon form and inflated at the point

of use. The entire ductwork for a seven-room house, for example, can be shipped in a box the size of an orange crate, or in compact rolls or reels. Tubing is made by cold rolling which makes possible walls as thin as metal foil, or as thick as conventional pipe walls.

Possible applications include downspouts and electrical conduit; inflation-lining of steel piping and vessels with corrosion-resistant tantalum ribbon; to repair water main leaks; field irrigation; for instrument tubing in the small sizes; light-wall, seamless missile bodies; and for packaging with foil-thick sizes. Strubing can be inflated by hydraulic or air pressure, or mechanically. Sizes range from smaller than a pencil lead to a pipe large enough to walk through. Coils as long as 15,000 feet can be shipped. Made by **Calumet & Hecla, Inc.,** Wolverine Tube Div., 17200 Southfield Rd., Allen Park, Mich.

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GOLD-COLORED ALUMINUM sheet in varied sizes, finishes

Nonfading gold-colored No. 80 Architectural aluminum sheet is available in any standard Kaiser embossed pattern in flat or coiled sheet form. Widths range up to 60 in. depending upon the pattern, in thicknesses from 0.060 to 0.125 in. Tempers are H-114, H-134, H-154, and H-174. Sunfast color is inherent in the alloy itself, and is brought out by anodizing. Photo shows a curtain wall with spandrel panels of the gold-colored aluminum sheet. Made by **Kaiser Aluminum & Chemical Corp.,** 1924 Broadway, Oakland 12, Calif.

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UNUSUAL BARGAINS

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5X, 10X, 20X—$80.00 Value—Only $19.95

Extremely sturdy with rack and pinion focusing, color corrected optics, turntable microscope body for inclined viewing, three different powers, long working distance under objectives, sufficient eye relief for easy viewing. Made from war surplus optical instrument so that you actually get $80.00 of value. Weighs 4 lbs., 13" high. 10-DAY FREE TRIAL! Accessory objectives available for powers of 15X, 30X, 40X.

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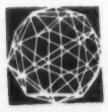

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Govt. Cost $900 — Bargain at $39.50

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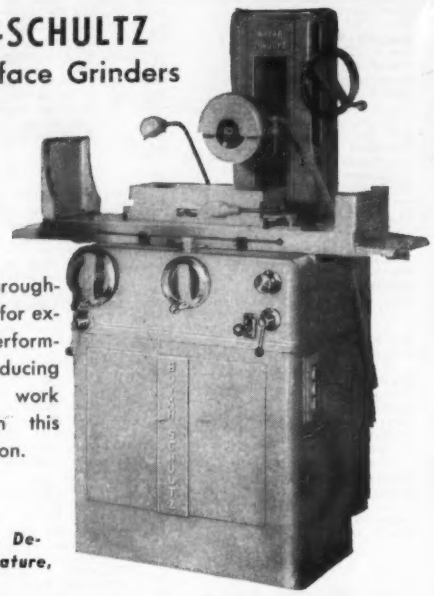

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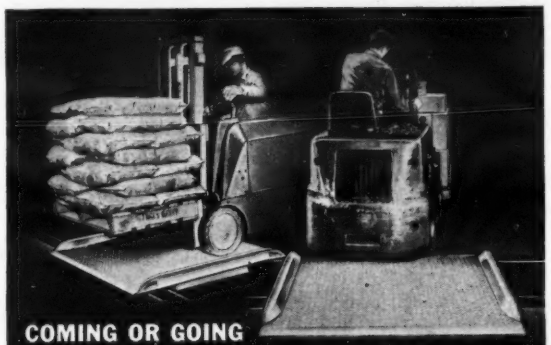

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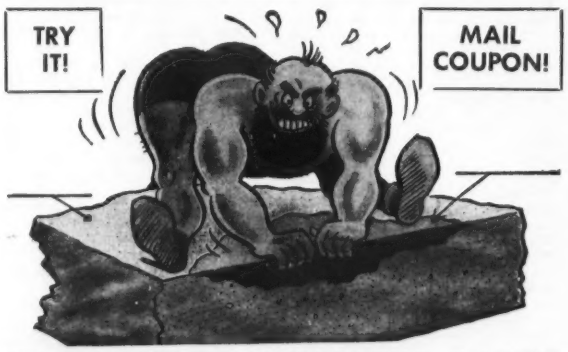

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